AUSTRALIA IN THE WAR OF 1939-1945

SERIES THREE

AIR

VOLUME I

ROYAL AUSTRALIAN AIR FORCE 1939-1942

AUSTRALIA IN THE WAR OF 1939-1945

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ROYAL AUSTRALIAN AIR FORCE 1939-1942

by

DOUGLAS GILLISON

CANBERRA
AUSTRALIAN WAR MEMORIAL

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PREFACE

WHILE the greater part of this volume is devoted to forty-two months of war, the text that introduces this most critical period has a time-span of thirty years. In a work titled *Royal Australian Air Force, 1939-1942* this calls for some explanation.

Only a few years after the Wright brothers, in 1903, achieved man's first flight in a powered aeroplane, a small group of Australians—men widely regarded, like their counterparts elsewhere in the world, as merely visionaries—were striving to advance their concept of the aeroplane as a weapon of war. Hitherto there has been no concerted record of this fascinating period when military aviation in Australia was no more than thoughts in men's minds.

The first real application of that early concept of the use of air power was developed, of course, in the war of 1914-1918. The very impressive part then played by the Australian Flying Corps, has been recorded with great fidelity and competence in a volume in the Australian official history of that war. But the need to fill the initial gap has remained until now, and so an endeavour has been made to meet it here with a survey covering the years 1909-1914. To avoid a sharp break in the continuity of the text this appears as an appendix at the end of this volume instead of as its prologue.

Just before the First World War ended and for three years immediately after it, there occurred another prefatory period. But at this time the actual founders of the R.A.A.F. were at work, and so we find ourselves concerned with names, events and newer concepts that became woven into the fabric of an air force that was to go to war more than eighteen years later. This therefore has been taken as the logical beginning for this volume even though, in our opening chapter, the final phase of the earlier war was still being fought.

As with the time-span, so also the geographical scope of this volume demands some attention. Research for the pre-war period drew on sources from Great Britain, the United States, Germany, Italy, Japan and China. This was necessary to reveal many of the influences prompting, and on occasion forcing, the decisions of Australian policy-makers; on the other hand it revealed, too, events which might have but did not influence them. Similarly, with the war period itself, it has been essential to survey events over the same wide geographical range. There has been a need also to recount and interpret major war operations in which the R.A.A.F. had no direct share, but which exercised profound influences on the course of events to which, in one way or another, the Service was to be deeply committed. Examples that come readily to mind are the Japanese attacks on Pearl Harbour, the Philippines and Hong Kong; some operations of the Japanese aircraft carrier divisions and the battle for Guadalcanal. The endeavour here has been to omit nothing within this scope that contributes

to clarity in explaining the role of the R.A.A.F. and at the same time to preserve as faithfully as possible the essential individuality of that force as a fighting Service though it was serving or about to serve in various theatres and under various commands. It is for this reason, too, that the text ranges from high command policy to the men serving in the air and on the ground at what we may term "the cutting edge" of the war.

Retention of strict chronological sequence has been a most earnest objective. Where judgment is called for, from whatever source, every effort has been made to resist the temptation to introduce evidence provided by "hindsight" and subsequent knowledge that was not available to those making decisions at the time. Always the intention has been to reveal such added knowledge as research has provided—often from enemy documents—*after* judgment has been passed. At times footnotes have been used for this purpose, and in such circumstances these are more extensive than usual. The reader who objects to long footnotes is asked to bear with these in the interests of accuracy and faithful presentation.

For the most part the sources used in this volume are freely stated in the text or in the footnotes. Even so I have a responsibility to express my indebtedness to researchers and narrators some of whom I have not known even by name. Foremost among these sources are the briefs and narratives prepared by the officers and staff of the R.A.A.F. War History Section. Here my special debt is to two of the officers-in-charge, Squadron Leader J. W. L. Jillett and Wing Commander K. B. Ready, who successively supervised the preparation of such documents relating to the operational period with which this volume is concerned. My grateful thanks are due also to Mr Richard Gunter and Miss Mary Ryan of the same staff, for aid unstintingly given at a later stage and during the writing of this volume. No tribute relating to the provision of basic material would be complete without acknowledgment of the work performed by Mr Charles Finchett who was the forerunner of the War History Section staff and who, then and later, made available many documents otherwise inaccessible and of great value to the War History Section generally and to this writer particularly. I am also indebted to Mr William Thomas and other officers of the Department of Air, Melbourne, for extracting the biographical details included in personal footnotes. Mr. Thomas also rendered valuable assistance in answering queries from the Official War Historian's Office in Canberra, with the help of source material only available at the R.A.A.F. Historical Section.

To the General Editor and Official War Historian, Mr Gavin Long, and his staff at Canberra, my debt is indeed great. Mr Long has given me expert historical guidance, direct literary help, and unfailing encouragement. I cannot adequately express my gratitude to him. To three of his literary assistants, Messrs William Lyster, Ralph Clark and Jack Seymour, who, at various times, have been directly concerned in the production of this volume, my sincere thanks are also due for their painstaking labour. Mr Lyster compiled a valuable account of the campaign in Malaya from

the R.A.A.F. point of view. Mr Clark did invaluable research, notably on the Japanese order of battle and the Darwin air raids, and in tracing and interpreting the movements of the Japanese aircraft carrier divisions. Mr Seymour finally prepared the volume for the printer. Mr A. J. Sweeting, Senior Research Officer on the staff of the Official War Historian, compiled the index. I also acknowledge my debt to Mr Hugh Groser and Miss Elaine Oates for the excellence of the maps and charts in this volume.

My earnest appreciation is extended too, to a number of senior officers of the R.A.A.F., some retired and others still on the active list. My debt to them is for patient and careful reading of draft chapters and wise, skilled and objective opinion. My gratitude for this aid and my respect for those who gave it is deepened by an awareness that, though this volume contains passages revealing sharp clashes of personality, sometimes bitterly expressed, there has never at any time been even a hint of self-interest in suggestions they may have made for amendment of the text. Among those to whom I am thus particularly indebted are Air Marshal Sir Richard Williams, Air Marshal Sir John McCauley, Air Marshal Sir Frederick Scherger, Air Vice-Marshal F. M. Bladin, and Air Vice-Marshal A. L. Murdoch. The help of many others is acknowledged in the text of this volume.

For reasons that are very obvious it is not unusual among those who undertake such prolonged tasks as this to acknowledge their debt to their wives. Far from being an exception I acknowledge mine, aware that the extent of the burden so borne cannot be measured.

D.N.G.

London,
6th August 1960.

CHAPTER 1

FORMATION OF THE ROYAL AUSTRALIAN AIR FORCE

THE Royal Australian Air Force had its origin in three linked events —the founding of the Central Flying School in 1912; the forming of the Aviation Instructional Staff which, as part of the Permanent Military Forces, opened the school under canvas in February 1914, and the sending overseas in the 1914-18 war of an Australian Flying Corps—a "half-flight" that went to Mesopotamia and eventually four squadrons that fought in the Middle East and France in 1916-18.[1] From the Australian Flying Corps' strength of 460 officers and 2,234 other ranks, some, all young, versatile and experienced in combat, were to help build an independent Australian air force; others were to play an important part in developing Australian civil aviation; and others were to remain in England to serve in the Royal Air Force that Britain had established in 1918.[2]

But while the Australian squadrons were still in action in France and Palestine, far-sighted leaders in Australia were picturing the day, predicted in 1917 by the great South African leader, General Smuts, "when aerial operations, with their devastation of enemy lands and destruction of industrial and populous centres on a vast scale, may become the principal operations of war". One of these leaders, a wise Australian commander, had already proposed as a war measure "of pressing importance" the establishment of a military air force proportionate to the army Australia was then maintaining. He was Major-General Legge,[3] Chief of the General Staff. In a memorandum dated 29th April 1918, he sought immediate authority to raise for the defence of Australia a citizen force of 300 officers and 3,000 other ranks, and "to immediately commence the construction of 200 aeroplanes and 12 balloons". "A sufficient air service," General Legge wrote, ". . . can go far towards breaking the strength of an attack, or increasing the value of an inferior defending force *if it can master the air service of the enemy.*"[4] "A thousand aeroplanes," he said, "would cost less than one battle cruiser. . . . From our knowledge of the present war and from my own experience, I have to report that the minimum requirements of the Air Service are as set out and their creation should not be delayed a day when we realise that they may be needed tomorrow."

---

[1] In November 1918 the AFC comprised No. 1 Sqn (commanded by Maj S. W. Addison) in Palestine and Syria, and three squadrons in France: No. 2 (Maj A. Murray Jones), No. 3 (Maj W. H. Anderson) and No. 4 (Maj W. A. McCloughry). Its organisation in England included a wing headquarters, an aircraft repair section and four training squadrons.

[2] The Royal Flying Corps, with 2,073 officers and men in 1914, together with the Royal Naval Air Service, grew into the Royal Air Force with 383 squadrons manned by 291,175 officers and other ranks at end of the first World War.

[3] Lt-Gen J. G. Legge, CB, CMG. (1st AIF: GOC 1 Div 1915, 2 Div 1915-16.) CGS 1914-20; Comdt Royal Military College, Duntroon, 1920-22. Regular soldier; of Sydney; b. London, 15 Aug 1863. Died 18 Sep 1947.

[4] The italics are Legge's.

As a minimum basis for the air service establishment in Australia, Legge listed: eight divisional, two army, and five reserve squadrons; schools, a factory, repair shops, aircraft parks and depots; a balloon wing and headquarters. For these he needed 654 officers and 7,209 other ranks. A majority were to be Citizen Air Force men; the permanent strength was not to exceed 20 officers and 500 other ranks. Aircraft for the squadrons (18 for each) were to total 270; for the aircraft parks and depots 135. Legge added that "even if the whole Australian Imperial Force were returning to Australia at once with all their equipment, the personnel and equipment asked for would still have to be provided . . . policy should be settled and a general and substantial authority given . . . to create, or justify the creation by the Government, of certain local industries". These industries were to include wire and steel-tube drawing, linen weaving and the manufacture of aero-engines and magnetos. "Expenditure should be fairly chargeable to 'War'," a comment against which the Minister for Defence, Senator Pearce,[5] wrote, "I approve—GFP." On the official file there are two annotations. One is in the handwriting of the Commonwealth Treasurer and acting Prime Minister, Mr Watt,[6] and is initialled by him. (The Prime Minister, Mr Hughes,[7] was overseas attending an Imperial Conference.) It reads: "Cabinet is of opinion that . . . steps should be taken to arrange for the construction of engines and raw material . . . the necessary measures to encourage local manufactures should at once be taken." On 1st May 1918, Senator Pearce initialled a second note reading, "C.G.S.—Please bring up your immediate proposals with estimates of cost." To this last direction Legge complied with detailed lists of expenditure for his plan, based on a capital cost of "under £1,000,000" and an annual cost of £465,000.

On 24th June 1918, another and equally emphatic plea for an adequate air service came to the Defence Council, this time from the Naval Board, which strongly supported a program drafted by Wing Commander Maguire,[8] Royal Naval Air Service, Air Service Adviser to the Board. Maguire proposed the establishment of an airship station at Sydney, one at Melbourne and one at Fremantle, each to have two non-rigid airships; three kite balloon stations, one for each of the three naval ports; a seaplane school with 12 machines; an aeroplane school with 20 machines; and two seaplane stations (each with 12 flying-boats). For this program 2,000 officers and men were sought. The Admiralty was to be asked to lend a seaplane carrier, complete with machines, spares and complement

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[5] Rt Hon Sir George Pearce, KCVO. Senator 1901-38. Minister for Defence, 1908-9, 1910-13, 1914-21, 1932-34. Of Perth, WA, and Melbourne; b. Mt Barker, SA, 14 Jan 1870. Died 24 Jun 1952.

[6] Rt Hon W. A. Watt. Premier of Victoria 1912-14. MHR 1914-29; Treasurer and A/Prime Minister 1918-20. Of Toorak, Vic; b. Kyneton, Vic, 23 Nov 1871. Died 13 Sep 1946.

[7] Rt Hon W. M. Hughes, CH. MHR 1901-52. Prime Minister 1915-23; Attorney-General 1939-40; Min for Navy 1940-41. B. Wales, 25 Sept 1864. Died 28 Oct 1952.

[8] Cdr O. H. K. Maguire, DSO; RN. Comd HMS *Bustard* 1914-16; RNAS 1916; Comd Houten Bay Air Station 1917; Air Adviser to Naval Board 1918-19. B. Monkstown, Ireland, 19 Sep 1885. Died 8 April 1924. (Served with and held rank of W Cdr in RAF.)

of pilots. (Later Maguire reported that the Admiralty had stated that such a vessel could not be spared.)

Maguire seems to have had no illusions about Australia's ally, Japan, then still engaged against Germany. In support of his program, he wrote, "I understand that Japan has no service aviation of any magnitude, but there is no doubt that she is making preparations to have a very large . . . air service in the near future." The Naval Board asked that £500,000 be allotted for the next financial year for the construction of stations, the purchase of aircraft and for pay. Like Legge, Maguire contended that Australia should be self-supporting in the manufacture of aircraft. "Due to its long distance from possible sources of supply," he wrote, "the conditions for importing machines in time of war, in sufficient quantities to be of use, would be of enormous difficulty."

Two days later both the military and naval programs were referred by the Defence Council to a committee consisting of the First Naval Member, Rear-Admiral Sir William Creswell;[9] the Director of Naval War Staff, Captain Thring;[1] Maguire; Legge; Major Harrison,[2] the officer commanding the Central Flying School at Point Cook;[3] and Mr George Swinburne, chairman of the Defence Department's Board of Business Administration. On 13th July this committee reported to Cabinet that the two plans should be presented so that the Government would be able to judge their cost. Accompanying this report was a statement by Thring on the navy's strategical requirements and a progressive and highly-ambitious program drafted by Maguire for the R.A.N. air service; this covered a six-seven years' period. Thring, emphasising the value of early information of the approach of an enemy, advocated seaplane stations in the island groups to the north of Australia as far advanced in the direction of the approach of an enemy as possible. There was further emphasis on this in Maguire's program, which provided for seaplane stations, one each at Bynoe Harbour to the west of Darwin, in Arnhem Land, on the mainland of New Guinea and at Rabaul, and five other stations on the Solomons-Santa Cruz-Fiji line.

On 13th August, Cabinet authorised a minute which read:

> Aviation Programme
> £3,000,000 approved to 30/6/21; Council of Defence to arrange allocation and details.

A sign of increasing awareness of the value of flying training was the disbanding, in September, of the Aviation Instructional Staff established as part of the Permanent Military Forces in 1913, and the formation in its place of No. 1 Home Training Squadron, A.F.C., A.I.F.

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[9] Vice-Admiral Sir William Creswell, KCMG, KBE; RAN. First Naval Member, Aust Naval Board, 1911-19. Of Silvan, Vic; b. Gibraltar, 20 Jul 1852. Died 20 Apr 1933.

[1] Capt W. H. C. S. Thring, CBE; RAN. Director of War Staff 1915-18. Of Wiltshire, Eng; b. Bradford-on-Avon, Wilts, 30 May 1873. Died 17 Jan 1949.

[2] Gp Capt E. Harrison. (Served in AN & MEF and 1st AIF.) Director of Aeronautical Inspection RAAF 1928-45. Of Melbourne; b. Castlemaine, Vic, 10 Aug 1886. Died 5 Sep 1945.

[3] Central Flying School, Point Cook, Australia's first military air unit, gave its first flying course in 1914.

To consider how the £3,000,000 vote should be allocated and how the navy and army projects should be modified, a sub-committee was appointed. Its members were: Rear-Admiral Creswell, absent from the first meetings through illness and represented by the Second Naval Member, Commodore Cochrane,[4] Legge, Maguire, Major L. Y. K. Murray, R.A.F. (Central Flying School), and Swinburne who was chairman. From the outset there was sharp division of opinion between Legge, the professional soldier and senior commander, and Maguire, a naval man with flying predilections. In retrospect the readiness of Cabinet to spend £3,000,000 in three years on air services when, only three years earlier (in November 1915) a cable had been sent to the British Government stating that it was "impracticable to organise complete squadron either in Australia or in conjunction with other Dominions",[5] is significant. Faced with the task of planning for both capital and annual expenditure within the £3,000,000 limit, the sub-committee spent hours in earnest and often keen debate. The official minutes of its meetings, the first of which was held on 2nd October, give an account not only of the strong clash of opinions, each expert in its own way, but of the fundamental issues that had to be decided before the R.A.A.F. was born. Legge, for his part, said he could not and would not attempt to modify his plan. Cochrane, for the navy, contended that with only £1,500,000 they could but initiate a program. Maguire, advocating an ambitious naval program, saw a unified service providing for both the navy and the army as the only immediate and economical way out. Legge, acutely conscious of the air force his army would urgently need if war continued, feared that the navy would steal the plums from the Treasurer's pudding and saw his plan in grave danger of drastic reduction.

Formation of an independent Australian air force had no immediate appeal for Legge though he admitted that that might well be the eventual course. He made it clear that his immediate objective was an air service "for land work" with not fewer than 400 planes, 600 officers and 7,000 other ranks. He pointed out that, despite its gallant pilots and commanders, the Australian Flying Corps had had practically no experience before the war in administration and command and that, for some time at least, they must be directed by those who knew what was meant by expenditure under a responsible Government. Later he wrote, "We want our show to be run by Australians and not to be importing officers all the time. The British, of course, have senior officers to spare. We have not got flying officers . . . sufficiently experienced in administration and organisation to run the service by themselves. . . . In England the extravagance and waste of the Air Service is simply appalling . . . and the reason is that the bulk of the flying officers, who are good officers, fine fliers and fighters, are not experienced in administration and organisation."

[4] Cmdre H. L. Cochrane, RN. Second Naval Member, Aust Naval Board, 1917-20. B. 16 Oct 1871. Died 29 Mar 1950.

[5] F. M. Cutlack, *The Australian Flying Corps* (1923), (*Official History of Australia in the War of 1914-18*, Vol VIII), p. 423.

At the time when Legge was offering this criticism, Major-General F. H. Sykes, the R.A.F's second Chief of Air Staff, was advocating an ambitious plan for the formation of an Imperial Air Force to cost £21,000,000 a year. As Saunders has written,[6] it was on this figure that Sykes' plan was wrecked. While it would be both unfair and misleading to infer that Legge's criticism was either meant to be or could fairly be applied to the British Chief of Air Staff (Saunders justly remarks that in the light of what happened in 1939 it is possible to maintain that Sykes was right), the contrast between the two pictures has perspective value.

But this dream of an Empire Air Force to which Australia would have been asked to contribute its share of 37 cadre squadrons (to be drawn from Australia, Canada, South Africa and New Zealand), if it was communicated to Australia at all, did not intrude on the discussions of the sub-committee. On the contrary there appears to have been a strong move in Government planning towards self-sufficiency. At this stage the Federal Cabinet was considering very seriously the construction of 200 aeroplanes in Australia.

Swinburne, as chairman of the sub-committee, wrote a memorandum in which he recommended: (1) that Legge's proposals should be examined by the Military Board and then submitted to a conference, which would include the First Naval Member, to determine how far the two Services could cooperate in such a plan; (2) that a Naval Aviation Service should begin with the establishment of two stations for naval defence and training, but that the full naval plan be deferred until the appointment of the new Naval Board; (3) that the whole air service should have one administrative authority; and (4) that the question of the local manufacture of aircraft should be referred to an Aircraft Construction Committee. The Military Board, in turn, recommended that Legge's plan be given a trial (if proved inefficient, then the more expensive plan, employing many more permanent members, would have to be considered). Legge's plan required the purchase from overseas of 200 aircraft within five years, in addition to 200 aircraft which the Australian Flying Corps was expected to bring back to Australia. Maintenance of a strength of 400 aircraft was considered more important than the manufacture of aircraft in Australia. Provision was also made for the admittance of Citizen Force trainees into the Australian Flying Corps on a voluntary basis for twelve months.

For a report on possible coordination with the naval plan, the army plan was referred to yet another sub-committee the members of which were Maguire, Murray and Major Sheldon[7] (Australian Flying Corps), all of them flying men. This sub-committee was forthright. It reported that two separate air establishments under two separate authorities would be "impracticable, undesirable and could in no way be recommended". Instead, inauguration of a separate air force under its own Minister and

[6] H. St G. Saunders, *Per Ardua* (1944), pp. 284-5.

[7] Maj W. Sheldon. Comd 4 Sqn AFC 1916-17, 2 Sqn 1918. Regular soldier; of Caulfield, Vic; b. Singapore, 20 Aug 1889.

staff was advocated. Any militia plan was unlikely to give the most efficient results. Officer pilots should be entered for five years' service and three years in reserve. Technical officers should be seconded from the navy and the army. The 200 aircraft to be brought to Australia by the Australian Flying Corps should be used and no more purchased until replacements were needed, the replacements to be new types. The proposed strength of the unified air force was 370 officers and 2,467 other ranks.

On 20th January 1919, Swinburne, as chairman of the initial sub-committee, reported that it recommended formation of an Australian Air Corps for both the army and the navy under one administration and with central control. Introduction of a complete plan should be deferred until after the results of the Peace Conference were known. Legge remained the dissenter, contending that unified control of naval and military aviation was unsuitable to Australia; that the plan for combined action gave an undue share of the money allocated to the navy, and that, while for half the vote a force of fifteen squadrons could be created for the land forces—part regular, part militia—the combined proposal would mean a much smaller number of aircraft and only four squadrons organised.

The first decisive step in the formation of an Australian air force was taken in January 1919 when the Defence Council recommended the establishment of a temporary organisation for a joint air service for both the army and the navy. Yet another committee—the Air Service Committee —was formed, but this time it was given administrative powers, under the Ministers for Defence and the Navy, authorised to spend £500,000 for buildings and plant, and instructed to consider the local manufacture of aircraft. Initially its membership was confined to Swinburne (again the chairman), Legge and Maguire.

Business before the first meeting of the Air Service Committee on 31st January included examination of a proposal to acquire 200 aircraft from Britain. The official minutes record, pointedly, that no decision was made pending determination of policy and "how far available money would go". But the problem was tackled promptly, and early in the committee's sessions reference is found to a familiar figure, General Birdwood, who, at A.I.F. Headquarters in London, included in the wide scope of his responsibilities the role of adviser on air service matters to the Commonwealth. Birdwood had cabled on 29th January recommending the formation of four squadrons equipped respectively with Sopwith Snipe single-seater fighters, Bristol two-seater fighters, DH-9A day bombers and Vickers Vimy long-distance and night bombers. In response, the committee recommended the purchase of 15 of each of these types as a charge to A.I.F. votes. These aircraft would be in addition to 20 Avro's and 12 Sopwith Pups which had already been ordered for training. Birdwood proposed that the four squadrons of the A.F.C., on their return

to Australia, should provide cadre training establishments and hold half service equipment, the remainder being for training only.

Government approval was given to the committee's recommendation that two air force stations be established, one probably on Corio Bay and the other near Sydney; these were to be in addition to the Central Flying School at Point Cook. Legge and Maguire agreed that, without additional outlay, the two new stations would be able to provide for the training of civilians. At the committee's fourth meeting on 24th February Major Goble,[8] R.A.F., whose services had been lent to the Commonwealth by the British Air Council, was nominated by Maguire as executive officer to the committee and the nomination was subsequently approved. Maguire, at this meeting, also suggested that the committee should recommend to the Government that legislation should be introduced for the creation of a new force similar to the R.A.F., but the committee decided that "for the present at any rate" the powers conferred by the *Defence Act* were sufficient.

On 1st April, the Governor-General (Sir Ronald Munro-Ferguson) wrote to the Secretary of State for the Colonies (Lord Milner) inviting the cooperation of the Air Ministry in "certain steps considered necessary to the initiation of an air force in Australia". "My Ministers desire," he wrote, "that first preference be given to members of the Australian forces and that every effort be made to secure them. In the event, however, of suitable Australians not being available, the Commonwealth Government would be glad if such personnel could be loaned from the R.A.F. for a period of two years." Posts to be filled were those of a Director of Air Services, a Director of Equipment, and two station commanders (lieut-colonels). Ten officers and a limited number of machines for a seaplane squadron and such officers and men as were necessary for airship and kite balloon units were also sought. Equipment asked for also included six flying-boats, three airships and three kite balloons. On the day this letter was written, Senator Pearce, in London, sent a cable to the acting Prime Minister (Mr Watt) asking that the Government ensure that applications were invited from members of the A.F.C., members of the A.I.F. who had joined the R.A.F., and any other Australian aviators available.

At this stage regulations under the *War Precautions Act* to bring the air force into being were being prepared from drafts made by Legge and Maguire. Maguire strongly advocated that the air administration should have complete control and that neither the Military Board nor the Naval Board should have any jurisdiction. On 5th April Swinburne told Legge that when the regulations had been promulgated the committee would be prepared to take over from him, as Chief of the General Staff, all organisation associated with flying. The plan drafted by the committee was for

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[8] AVM S. J. Goble, CBE, DSO, DSC. (RNAS 1915-18; comd 5 Sqn RAF 1917-18.) Acting Chief of Air Staff RAAF 1923-24, 1933, and 1939-40. Aust Air Liaison Offr to EATS, Canada, 1940-45. Regular air force offr; of Melbourne; b. Croydon, Vic, 21 Aug 1891. Died 24 Jul 1948.

an air force to be administered by an Air Board under the Ministers for Defence and the Navy. In the first two years its strength was not to exceed 1,400 officers and other ranks.

Meanwhile, Maguire, who had done so much of the planning, had embarked for England. The Air Service Committee, loath to lose his services, arranged for his appointment as Australian liaison officer in London. But, as Maguire prepared to step out of the Australian scene another important figure was stepping in. At a meeting of the Air Service Committee on 16th May, the chairman read a cable message from Senator Pearce in London proposing that Lieut-Colonel Williams,[9] a regular soldier who had commanded No. 1 Squadron A.F.C. with distinction, should be retained in London to assist Maguire. The proposal was adopted.

On 4th June the Governor-General received a cabled message from the Secretary of State for the Colonies which said: "Please inform your Ministers that announcement will be made in the House of Commons today that H.M. Government have approved of a proposal of Air Council that a gift of aeroplanes not exceeding 100 in number should be made to any Dominion requiring machines; object of H.M. Government being to assist Dominions wishing to establish air forces and therefore developing defence of Empire by air." The offer was gratefully accepted.

At a meeting two days later the Air Service Committee dealt with the first definite plan for the development of commercial aviation in Australia. It came from a group of businessmen who had registered a company to be known as Aerial Transport Limited, which planned to operate passenger, freight and mail services within the Commonwealth, and offered to make its aeroplanes available for use by the Government's pilots; to train up to 50 Government pilots a year without charge, the pupils' salaries to be paid by the Government; and to place the whole of its organisation at the Government's disposal in the event of war. It also proposed that all employees of the company should be enrolled as members of the A.F.C. Reserve. Legge recommended, and the committee approved, that the company should be informed that the Government welcomed its proposals and that, as far as possible, its services would be used.

About this time the attention of the committee was swung sharply back to the question of whether Australian or "imported" officers should command the new air force. On 12th June the Secretary for the Colonies informed the Australian Government that the Air Council could submit names for a Director of Air Services (a brigadier-general at a salary of £1,500 a year) and a Director of Equipment (a colonel at £1,200 a year). But Mr Hughes intervened with an urgent cable message to Watt in which he said "I earnestly hope that you will not appoint any but Australians to these or any other positions. In my opinion such a

[9] Air Marshal Sir Richard Williams, KBE, CB, DSO. (1914-18: Comd 1 Sqn AFC 1917-18, 40 Wing RAF 1918.) Chief of the Air Staff 1921-38; Air Officer i/c Administration, Coastal Cd RAF 1939; Air Member for Organisation and Equipment RAAF 1940-41; AOC Overseas HQ RAAF 1941-42; RAAF Representative, Joint Chiefs of Staff, Washington, 1942-46; Dir-Gen Civil Aviation 1946-55. Regular air force offr; of Adelaide and Melbourne; b. Moonta, SA, 3 Aug 1890.

policy would be not only quite wrong, but exceedingly foolish." To this Watt wrote a peremptory minute—"I concur. Inform Defence Department and ask immediate attention."

The acting Defence Minister (Senator E. J. Russell) had meanwhile appointed a special committee to review the Defence estimates. This committee, with the concurrence of Goble and Lieut-Colonel E. D. M. Robertson, R.A.F., Air Service Adviser to Admiral Lord Jellicoe, who was then investigating Australia's defences, recommended that the formation of airship and kite balloon sections should be deferred "pending further developments". This stay in proceedings with lighter-than-air craft was accompanied by a more active investigation of the question of providing Australia with aeroplanes. The Cabinet's view of this project was expressed when, on 26th July, Watt cabled to Pearce in London, "Proposed Arsenal would produce 50 aeroplanes per annum, but not ready for two to three years." In the House of Representatives on 31st July, the Minister for Works and Railways (Mr Littleton Groom), answering a question, explained that an application had been received from a British firm (the Aeroplane Manufacturing Company, London) seeking an invitation to open an aircraft factory at its own expense, even without any guarantee of orders. "The Government decided," Groom told the House, "that it was unable at present to invite any one firm to start a factory in the Commonwealth as a number of firms were considering the matter and as local companies were being formed to undertake aerial transport. The Government would, however, be only too glad to offer any facilities to companies who determined to manufacture aeroplanes in the Commonwealth."[1]

There were members on both sides of the House ready to champion the development of air services, with heavy emphasis on defence. A factor which stimulated this advocacy was the idea that an air force offered opportunity for economies in both men and money that did not occur in the other two fighting Services. As early as December 1918, Dr W. R. N. Maloney, a staunch socialist, had declared from the Opposition benches: "The defence of Australia must be entrusted to the aeroplane and the submarine. A super battle cruiser or a super battleship costs, with its equipment, about £4,000,000 and carries many valuable lives. For that sum we could get 10,000 aeroplanes; and if we standardise our aeroplanes, with a factory in each of the six States, they would cost only about £250 each. When an aeroplane is destroyed it means the loss of two lives only; but it may sink a leviathan man-of-war costing £4,000,000 and carrying many men."[2] Dr Maloney's figures were inaccurate, and his anticipation of a single aircraft destroying a "leviathan man-of-war" was an over-simplification of an extremely hazardous operation, but his general contention expressed the same argument which Legge had emphasised eight months earlier.

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[1] *Commonwealth Debates*, Vol 88, p. 11131.
[2] *Commonwealth Debates*, Vol 87, p. 9481.

Such arguments brought no consolation to the planners behind the scenes as Swinburne showed when, in August, he drafted a cable message which was sent to Pearce in London: "Although strongly urged by the committee the Government has not yet authorised expenditure for the initial scheme for Corio Bay and Sydney. Works have not yet commenced and could not be completed before next year. The Government is anxious to obtain sanction of full Cabinet before launching so large an annual expenditure; also awaiting Jellicoe's report." And the next scene was a depressing one: the full Cabinet withheld its sanction and the Treasurer's guillotine descended. On 16th September Swinburne reported to his little committee, now comprising himself, Legge and Goble, that the Cabinet had suspended the whole air service plan and that that year's estimates were to be confined to a limited provision for the Central Flying School only. It must have been with a sense of acute frustration that the committee drafted one of its last messages to London. In this Maguire and his colleagues were informed that the flying school would be reduced to "practically a store section", and that the committee was recommending that all members of the A.F.C. should be returned forthwith. "The gift aeroplanes," the message concluded, with a note of despondency, "can be shipped when convenient to Air Ministry and stored here." The last meeting of the Air Service Committee, held on 8th October 1919, noted that Lieut-Colonel Williams would embark for the return voyage on 14th October.

Planning was to be resumed though the Air Service Committee had ceased to exist. The planners had some support from parliamentary advocates who sought to outweigh Treasury caution and it was significant that the Treasurer himself, Mr Watt, when introducing the Supply Bill on 23rd October, offered evidence in defence of air service expenditure. "We have read in the press," he said, "that the Japanese will appropriate £25,000,000 for a four-years aviation plan."[3] The truth was that in Australia, as in Britain, where Lord Trenchard,[4] one of the great figures in the history of Service aviation, was planning to remould the R.A.F. within limits set by rigorous economy, the people were too concerned with post-war rehabilitation to react favourably to heavy defence expenditure—a reaction shared by the Cabinet. But Pearce was too much of a realist to evade the problem. Obviously the first answer must come from both the army and the navy and so the Commonwealth's first, and temporary, Air Board of four officers, two from each Service, came into being—Captain Nunn,[5] with Goble, who had served in the Royal Naval Air Service, representing the navy, while the military members were

[3] *Commonwealth Debates,* Vol 90, p. 13899.

[4] Marshal of RAF Viscount Trenchard, GCB, GCVO, DSO. GOC RFC in Field 1915-17; Chief of Air Staff 1918-29; Commissioner Metropolitan Police 1931-35. Of London; b. 3 Feb 1873. Died 10 Feb 1956.

[5] Vice-Adm W. Nunn, CB, CSI, CMG, DSO; RN. Comd HMS's *Aurora* and *Curlew* in Harwich Force 1917-19, HMS *Ramillies* 1924-25. Of London; b. Ripon, Yorks, Eng, 10 Dec 1874. Died 7 Apr 1956.

Brigadier-General Blamey,[6] whose record placed him in high demand as an adviser, and Williams, who brought with him up-to-date information about Air Ministry planning in addition to years of air combat experience.

On 31st January 1920 the new board held its first meeting. It had been appointed specifically to prepare an air policy for Australia. Its report, completed on 7th February only eight days after the first meeting, was both frank and precise. It contained an early note that the board's estimates were necessarily based on figures prepared by previous authorities without verification, which, anyway, could be little more than a guide because it was not possible to foresee accurately the effect on cost of the rapid change and development inevitable in an air corps. With this qualification, the report presented a six-years program with "a valuable air force at the end of two years", which would be "able to take the field should necessity arise". The estimates were for these first two years only—first year, £1,790,110; second year, £2,338,155. This was brave planning, yet there was the inevitable qualifying statement: "The Board does not recommend any reductions from the figures submitted . . . but, in accordance with the request of the Minister that, in view of the financial situation, it may be impossible to meet the full requirements, Air Board has considered means by which these can be reduced with the least prejudice to the defence of Australia."

For the naval portion of the six-years plan the recommendations of Jellicoe were adopted—one squadron each of fighting and torpedo-carrying aeroplanes, each with a strength of 18 aircraft; one squadron each of ships' aeroplanes (or seaplanes) and of flying-boats for training, each with a strength of 12 aircraft, and eleven and a half flying-boat service squadrons. Aircraft required for this part of the program, including 50 per cent spare aircraft, totalled 297. Military requirements were: 8 single-seater fighter and 6 reconnaissance squadrons of 24 aircraft each; 6 bombing squadrons (4 light of 18 aircraft each and 2 heavy of 10 aircraft each); one training squadron of 18 aircraft. Provision of spare aircraft again amounted to 50 per cent, which would be "the minimum needed until aircraft were being produced in Australia", making a total of 669 aircraft. The grand total of aircraft for the entire program, with spares, was 966 in 36½ squadrons. If finances demanded it, reduction on the naval side was to be 6 squadrons. On the military side the reduction was to be on the basis of 18 instead of 24 aircraft for each fighter and reconnaissance squadron, and, if civil aviation could use bomber-type aircraft, the 4 light bomber squadrons could be dispensed with.

Reviewing the probable direction and object of an attack on Australia, the board made an appreciation that had point 20 years later. "Trade with Japan has greatly increased during the war," the report said, "but the restrictions on Asiatics in Australia have not decreased. Japan is insisting

[6] Field Marshal Sir Thomas Blamey, GBE, KCB, CMG, DSO. (1st AIF: GSO1 1 Div 1916-17; Brig-Gen GS, Aust Corps, 1918.) GOC 6 Div 1939-40, I Corps 1940, AIF in ME 1940-41; Dep C-in-C ME 1941-42; GOC-in-C AMF 1942-46. Of Melbourne; b. Wagga Wagga, NSW, 24 Jan 1884. Died 27 May 1951.

on the terms of the Mandates which give the administration of the German Pacific possessions to Australia being framed so as to prevent the restrictions on Asiatics now operating in Australia being applied in the islands. There is no need to elaborate on the attitude of either Australia or Japan on the White Australia question. Japan might consider that, if opportunity offered, and particularly if the attention of the British was occupied in other parts, she could obtain her wishes without too great a commitment other than that of her naval forces. A reasonable plan of action to such an end might be to insert her fleet between the centre of the Empire and the main Australian centres, by occupying a line, Singapore, Fremantle, Albany, as a first step."

Contemplating enemy action on the east, the board observed that Sydney and Melbourne were the vital centres, submission of which would be necessary before a foreign power could impose its will on the people; action possible at that time by "two northern powers only—America and Japan". Before Australia could be defended adequately it required an air service so distributed as to be capable of watching and furnishing timely information of the approach of any large convoys from the north, by either the eastern or western routes, and of destroying any air forces which might precede or accompany them.

The board found the problem of the administrative control of an air force—a touchy question for a conference of senior officers of the army and the navy—to be insoluble. The report stated that, because the Australian Air Corps would have no independent function, it was vital that the naval and military forces should be represented strongly on the controlling body to ensure coordination. Obviously a body of this kind could not control the internal organisation and administration of the corps; administration and discipline of any corps could best be achieved by a commanding officer. An objection to this was that it would be essential for such a commander to have direct access to the Minister in charge of the corps and it would be "trusting to personalities too much" to ensure that such an officer did not tend to eliminate the naval and military controlling body. "In fact," the report said, "it might be forecasted with certainty that, should a strong personality obtain the command, this result would be inevitable." So, on the actual question of an appointment, the representatives of the two Services could not agree. The naval members insisted that a naval flying officer should be the first appointed (later the appointment could alternate between the navy and the army), or, failing that, a naval and a military officer of equal rank should be appointed to exercise joint control. The army view opposed priority for the navy and regarded dual control as likely to divide the corps when the aim should be unity from the beginning. The board said that, until this question was decided, it was not possible to determine details of organisation.

On the manning of the corps the board agreed that the greater proportion of men could well be enlisted in a citizen force. One training and

two fighting squadrons, four flying-boat squadrons, and one of ships' aeroplanes or seaplanes, should be manned entirely by regulars and should form an instructional cadre from which the regulars for all the remaining squadrons should be provided. Provision of all equipment for the air force would be the function of the Australian Arsenal which, when organised, would undertake aircraft production.

With this report before him, Pearce held his hand while legislation to be placed before Parliament was considered. In Parliament itself, Dr Maloney, ever inquiring, questioned Major-General Sir Granville Ryrie, Assistant Minister for Defence, and learned that the contract price for a DH-9A (light day bomber) was approximately £3,300 delivered in Australia, while the twin-engined Vickers-Vimy heavy bomber would cost about £10,000;[7] figures which were in very sharp contrast with Maloney's earlier estimates and a reminder that even an air force would be expensive.

On 9th September 1920 the House of Representatives listened to a notable exposition of the Government's defence policy by the Prime Minister. This contained an emphatic and in some ways prophetic picture of what air power might do. He asked: "What are the main factors in a determination of the scale of defence by sea, land and air, which it is necessary for Australia to maintain in the immediate future?" He answered with four headings—the international situation; the League of Nations as it imposed obligations on and as it offered protection to Australia; Australia's partnership in the British Empire; and Australia's policy and ideals, "especially the White Australia policy". He then posed the problems inherent in the defence of a 12,000-miles coastline and in the obligations and responsibilities imposed on Australia by her control of the Pacific Mandated Territories, the protection of which "by land and air", he said, "would be a very serious problem".

> It may be confidently expected that aviation and those scientific methods of warfare which developed so rapidly during the war, and which, particularly during the latter portion of the conflict, were resorted to so freely, may develop still further. No doubt that development will completely revolutionise warfare and let us hope that it will make warfare impossible. That, I think, is the earnest prayer of every civilised man. If some scientist were to find a means for the general destruction of mankind, I venture to say that that would abolish war. . . . It is on the sea that our destiny lies and it is on the sea that we must uphold our freedom. The air, that new element which man has now conquered, is but the sea in another form and it is on the sea and in the air that we shall have to look for our defence. . . . We believe that in the air we may hope to create a force which will be of incomparable service in defending us against an enemy. The Government therefore, are placing on the Estimates a sufficient sum for the building up of an efficient air force. . . . It is proposed to afford such inducements as will encourage manufacturers to make engines and aeroplanes in this country and the Government will not hesitate to give a very substantial bonus for that purpose.

In closing his speech Hughes declared, "I am—if honorable members care to say so—a fanatic in my belief in aviation."[8]

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[7] *Commonwealth Debates*, Vol 93, p. 4379.
[8] *Commonwealth Debates*, Vol 93, pp. 4386-93.

A week later Sir Joseph Cook, then Treasurer, introducing the 1920-21 Budget, said "The experiences of war have shown that the air force must now be regarded as a vital necessity to both arms of defence." He was explaining the vote of £500,000 for the air services with an additional £100,000 for civil aviation.[9]

Next day in the Senate, Pearce, as Minister for Defence, in asking for this vote, outlined the Government's plan for the development of the air force. The funds required had been largely reduced by the gift by Britain of 128 aeroplanes with equipment of all kinds, he said. A considerable number of men had already been trained and it was hoped that measures relating to civil aviation would ensure a reserve of both airmen and machines. A combined naval and military air corps would be organised under a board composed of flying, equipment and finance officers. It was unnecessary, at that juncture, to create a separate department and wasteful to separate the naval and military sides of the Service. The corps would, for convenience, be placed under the control of the Minister for Defence. A bill would be submitted for the constitution, administration and discipline of the air corps. The Minister would be assisted by an air council which would include officers of the navy, army and Air Board, with a Controller of Civil Aviation as an additional member.[1]

So much for the plan. Warning of its cost came from Mr Marks,[2] who often espoused the cause of aviation and particularly the air force, when, on 7th October, he told the House of Representatives that he had sought "from all flying men of any importance who had come back from the front", their estimates of Australia's air force needs. "I am afraid to mention the cost of what they propose," he said. "They consider that over £2,000,000 will be required to provide an effective air force for Australia."[3] The first Air Board's six-years plan, then in the custody of the Minister, was, of course, still secret.

The passage of the Air Navigation Bill, introduced in the Senate by Pearce on 4th November 1920, while it related specifically to civil aviation, was regarded as a stepping-stone to air force economy. "If we can encourage civil aviation it will doubtless relieve the Commonwealth of a large expenditure upon military aviation," the Minister said in his second reading speech.[4]

The next formal step in the development of the air force was the definition, by Statutory Rules,[5] of the constitution of the Air Council—the Minister for Defence, a naval member, a military member, two mem-

[9] *Commonwealth Debates*, Vol 93, p. 4674.

[1] *Commonwealth Debates*, Vol 93, p. 4717.

[2] W. M. Marks. (RNVR 1915-19.) MHR 1919-31. Solicitor; of Sydney; b. Jamberoo, NSW, 6 Jun 1875. Died 31 Mar 1951.

[3] *Commonwealth Debates*, Vol 93, p. 5432.

[4] *Commonwealth Debates*, Vol 94, p. 6233. Assent to this measure, which gave the Commonwealth power to control air navigation previously controlled only by the police laws of the various States, was reported on 6 April 1921.

[5] Statutory Rules 1920, Nos. 222/3.

bers of Air Board (one nominated by the Naval Member and one by the Military Member) and the Controller of Civil Aviation; and of the Air Board—First Air Member, Director of Intelligence and Organisation; Second Air Member, Director of Personnel and Training; Third Air Member, Director of Equipment; and a Finance Member.

The Air Council was constituted to advise the Minister on air force provisions necessary for the defence of Australia, on the general direction of air policy in its naval and military aspects, and on the coordination of civil aviation. All proposals entailing an expenditure of more than £100 were to be referred to the council by the Air Board. On 16th December the Civil Aviation Branch of the Department of Defence came into being with Lieut-Colonel Brinsmead[6] as its first Controlier.

The new Air Board was constituted on 9th November 1920 with Williams as First Air Member, Goble as Second Air Member, Captain McBain[7] as Director of Equipment and Mr Joyce[8] as Finance Member; Mr Coleman[9] was secretary. At its first meeting on 22nd December 1920, the board had before it a long memorandum on the formation of the Australian Air Force, compiled by Williams. A most comprehensive document, it set out general principles and a very detailed program. "The task is the greater," Williams explained, "because Australia has not previously attempted to do anything in this direction further than the actual preliminary flying training of a limited number of pilots. . . . There is no peacetime experience in organisation, administration and training of a service such as a modern air force in any part of the Empire on which to rely, for such a service on a peace basis was never attempted until the formation of the permanent R.A.F. after the recent war."

The program submitted provided for an air force headquarters, a liaison office in London, and two wing headquarters; these to control two fighter squadrons for air defence; one squadron each of float-seaplanes, flying-boats and torpedo carriers for naval cooperation; and for military cooperation, two corps reconnaissance squadrons, one flying training school, a recruit depot and non-technical training centre and a stores depot. All squadrons would be manned as regular units except the corps reconnaissance squadrons which would be Citizen Force units. The principles laid down by the R.A.F. would be adopted with only such modifications as were dictated by local conditions. The forming of Citizen Force units was regarded as an experiment and their cost and value would be compared with those of the permanent units after a period of trial. A considerable number of men who had served with the A.F.C. or R.A.F.

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[6] Lt-Col H. C. Brinsmead, OBE, MC. (24 Bn; Staff Offr for Aviation AIF 1918-19.) Controller of Civil Aviation 1920-33. Of Melbourne; b. Hampstead, England, 17 Mar 1887. Died 11 Mar 1934.

W Cdr P. A. McBain, MBE. (1st AIF: Lt AFC.) B. 22 Apr 1891. Died 7 May 1937.

[8] A. C. Joyce, CBE. Commonwealth Auditor-General 1946-51. Of Melbourne and Canberra; b. Melbourne, 22 May 1886.

[9] P. E. Coleman, OBE. (1st AIF: 1 Div HQ 1914-15; Capt AIF HQ 1916-18.) Secretary Air Board and Air Council 1921-39; Asst Secretary Dept of Air 1940-45; Asst Secretary Dept of Defence 1945-50. Of Elsternwick, Vic; b. Malvern, Vic, 8 Dec 1892. Died 13 Apr 1950.

would be willing to enrol in the Air Force Reserve, formation of which should be undertaken at the earliest possible opportunity. In time it might even be possible to have reserve units organised in civil aerial transport companies. All officers engaged in staff administrative duties must be qualified flying officers, but, owing to the limited administrative experience of most Australian flying officers, it might be necessary to obtain some officers with administrative experience for whom flying training would have to be provided later. The aim should be to have only graduates of the Staff College appointed to the Air Staff and higher appointments in other branches. This report was passed to the first meeting of the Air Council on the 23rd December 1920 and was approved generally.[1] The use of the machinery of the departments of the Navy and Defence in the administration of the air force was also approved by the council. With one eye on civil aviation, the air force offered courses for former A.F.C. and R.A.F. pilots who intended to engage in commercial aviation, and in 1920 nine airmen took advantage of the offer.

On 15th February 1921, the Air Board, at the instance of Williams, sent to the Air Council a recommendation that the Australian Air Force be formed as from 31st March. It was the approval of this recommendation by the Air Council and the Minister for Defence that brought the Royal Australian Air Force formally into existence on that date, though it was not until July of the same year that the prefix "Royal" appeared in the Air Board agenda.

The new air force came into being with an initial strength of 151, of whom 21 were officers.[2] Its equipment, in addition to the gift aeroplanes from Britain,[3] consisted of 20 standard trainers (Avro 504-K) and 10 scouting planes (Sopwith Pups bought during the war) and 6 Fairey seaplanes bought in 1921, to which 6 Avro 504-K's, built in Australia, were later added. Headquarters of the force were in Melbourne, a liaison office was maintained in London, and No. 1 Flying Training School and No. 1 Aircraft Depot at Point Cook.

There was a school of opinion which strongly advocated military participation in civil aviation, arguing that the union of the two would provide not only good training for Service flyers but economic benefits from essential aerial services. Pearce himself supported a proposal Brinsmead had made soon after he became Controller: that the air force

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[1] The council comprised: the Minister for Defence, Senator Pearce; Rear-Adm Sir Allan Everett (represented by Capt C. T. Hardy); Maj-Gen Sir Brudenell White; W Cdrs R. Williams and S. J. Goble and Brig-Gen T. A. Blamey.

[2] They were: General List—Wing Commanders R. Williams (Director of Intelligence and Organisation), S. J. Goble (Director of Personnel and Training); Squadron Leader W. H. Anderson; Flight Lieutenants (Honorary Squadron Leaders) R. S. Brown, A. M. Jones, E. Harrison and H. J. Berryman; Flight Lieutenants A. P. Lawrence (Medical), L. J. Wackett, A. T. Cole, H. F. De La Rue, and H. N. Wrigley; Flying Officers (Honorary Flight Lieutenants) F. H. McNamara, VC, A. H. Cobby, F. W. F. Lukis, J. K. Fryer-Smith; Flying Officer (Observer) W. S. J. Walne.
Quartermaster's List—Squadron Leader P. A. McBain (Director of Equipment); Flying Officers H. Johnston, C. J. Harman and J. H. Rogers.

[3] 128 machines (DH-9, DH-9a and SE-5a types), which with spares etc. were valued at approximately £1,000,000. The 28 in excess of the offer of 100, mentioned earlier, represented replacements of 28 given during the war by citizens and organisations in Australia.

should establish an experimental mail service between Geraldton and Derby in north-western Australia. Faced by opposition from Williams and other Service leaders, who insisted that the establishment in men, aeroplanes, ground transport and spare parts would have to be very much larger than he contemplated, Pearce on 19th March 1921 expressed his personal regret that "the potential value of such a service in the national economic sphere failed to elicit any response from the Service members of (Air) Council". But when the Air Board supported Williams, the Minister recommended that the proposal should be deferred until more efficient machines were available. In the meantime the air force undertook a survey of the route between Geraldton and Derby; it was carried out by Flight Lieutenant Cole.[4] Eventually Cabinet declared a preference for an airmail service operated by a private company on a subsidy basis. At this time a number of former A.F.C. pilots, in whom the urge to fly was dying hard, were travelling round the country making a spectacular if somewhat precarious living from commercial "joy flying". From these flyers Australian aviation drew not only the nucleus for its first civil aircrews, but, as men like Norman Brearley[5] and Hudson Fysh[6] demonstrated, some very able executive officers.

This link with civil flying had a political aspect. When Pearce introduced an Air Defence Bill in the Senate on 8th April, he said he hoped commercial aviation would develop and so provide a large number of aeroplanes readily available for war, and a training ground for aviators whose services would be available in the Citizen Forces.

This Bill provided for a permanent establishment to be known as the Naval Air Force, which would be "practically complete for war purposes", and a military air force which would be only partly regular and, in the main, would consist of members of the Citizen Forces. Both the military and naval colleges were to provide officers for the air force, thus avoiding the expense of a separate air force college. The Government thought that sufficient men who had served in the flying corps would apply and thus provide adequate staff for the new force.

The following establishment was proposed for the first year: in Victoria a headquarters, one aircraft depot, one flying training school, one recruit and non-technical depot, two aeroplane squadrons (one to be composed of Citizen Force men) and one flying-boat squadron; in New South Wales two aeroplane squadrons (one of Citizen Force men) and one seaplane squadron for use on ships of the Royal Australian Navy. For this program £500,000 was to be provided. Twelve seaplanes and nine

[4] AVM A. T. Cole, CBE, DSO, MC, DFC. (1st AIF: Nos 1 and 2 Sqns AFC.) Comd Central and Southern Areas 1939-41, 235 Wing RAF 1941-42; Forward Air Controller Dieppe Raid 1942; AOC RAF Northern Ireland 1942-43; Comd North-Western Area 1943-44; RAAF Liaison Offr SEAC 1945. Regular air force offr; of Malvern, Vic; b. Glen Iris, Vic, 19 June 1895.

[5] Gp Capt N. Brearley, DSO, MC, AFC. (1914-18: King's Liverpool Regt, RFC and RAF.) Comd RAAF training units 1941-44. Founder and managing director, WA Airways Ltd. Of Perth, WA; b. Geelong, Vic, 22 Dec 1890.

[6] Sir Hudson Fysh, KBE, DFC. (1st AIF: 3 LH Regt and 1 Sqn AFC.) Managing Director Qantas Empire Airways 1923-47, Chairman since 1947. Of Sydney; b. Launceston, Tas, 7 Jan 1895.

flying-boats would be ordered from Britain and for the rest of the strength in aircraft, the gift machines from Britain would be used. There were to be 150 officers and 1,000 other ranks for the Permanent Air Force and 36 officers and 300 other ranks for the Citizen Air Force. In later years new units would be formed chiefly from Citizen Force trainees.

Senator H. E. Pratten protested against the incorporation in the Air Defence Bill of the British *Air Force Act* which, in turn, incorporated the British *Army Act*. Pratten summed up saying, "If we swallow at one gulp the British *Army Act* of 190 sections there is also a provision by which, automatically, any amendment of the British *Army Act* will apply to Australia without coming before Parliament." He opposed the idea "that the air force in Australia should bear to the air forces of the Empire the relationship which Australia's navy bears to the navy of the Empire". If there was one arm of defence that must be independently built up it was the air force and no precedent made by the military or naval forces must necessarily govern it. Pearce submitted an amendment which removed the application of the *Air Force Act* in peace, but Pratten pressed for its complete removal, saying "it would be better for us to have nothing to do with the Imperial *Air Force Act*". His protest was unsuccessful and the Bill was read a third time and passed to the House of Representatives where it was read a first time on 18th May. Parliament was prorogued soon afterwards and the bill lapsed along with the rest of the Government's unfinished legislation.

Despite lack of statutory authority and the appearance of lowering economic clouds, the infant air force began taking its first steps. Early in July an order was placed with the Australian Aircraft and Engineering Company, of Sydney,[7] for the manufacture of six Avro (504-K) aircraft to cost £7,100. In the same month the Air Board recommended and the Air Council approved, "subject to funds being made available", the purchase of land at Laverton as a site for No. 1 Aircraft Depot, No. 1 Wing Headquarters and Nos. 1 and 2 Squadrons (a corps reconnaissance and a single-seater fighter squadron respectively), and the purchase of a site at Richmond, New South Wales (where some years before the State Government had established a flying school), for No. 2 Wing Headquarters and Nos. 3 and 4 (aeroplane) Squadrons.

Also in July, the Air Council laid down as policy for the development of the air force, engagement of only such officers and other ranks (except for naval units) as were necessary for the cadres of war units and the training and instruction of Citizen Force recruits. The program for 1921-22

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[7] The story of the Australian Aircraft and Engineering Company, floated in May 1920 by a syndicate which had acquired representation of A. V. Roe and Company in Australia, was an illustration of good intentions with a sad finale. The order for six Avro machines was placed to encourage local manufacture though they were not required at the time. One-third of the contract price was advanced immediately; extensions of the delivery date were allowed, and the company finally produced the aircraft which satisfied all tests. The engines were provided from air force stocks. Next, the company, having failed to obtain further Avro orders, undertook to design a commercial aeroplane, one of which was ordered for the Controller of Civil Aviation (at a cost of £5,900 without the engine), but the company went into liquidation soon after receiving the contract, arrangements having been made to complete the aircraft on order.

provided for a minimum permanent establishment—"to be attained gradually"—of 108 officers and 791 other ranks.[8]

On 25th July 1921 Air Board Order No. 1 was promulgated. This document contained no flights of high air force policy, just a sobering instruction—premises known as the Guiding Star Hotel, Braybrook, were out of bounds to the Permanent Air Force while on duty!

Within the next few weeks approval of Air Council was obtained for the purchase of a site on the shores of Corio Bay[9] for No. 6 Squadron (flying-boats) and for the construction of 12 landing grounds between Perth and Derby for a civil air service.

In November, while the Washington Disarmament Conference was in its opening session, the Air Council approved the recommendation of the Air Board that a R.A.A.F. Reserve should be formed, but this was little more than token consent, for the council insisted that there could be no grant for uniforms or allowances, and that annual training could not be given! Williams, who made the proposal, estimated that there were about 500 trained pilots in Australia. The R.A.A.F's current permanent strength was 50 officers and 258 other ranks. Lack of funds made it improbable, he said, that additional men could be enlisted in that financial year.

In December a grant from air force funds was made to the Melbourne University for the construction and equipment at the university of an aerodynamic laboratory, including a wind tunnel. The Government approved an amount of £1,500 for this—just half the amount recommended by Air Board. The restraining hand of the Federal Treasurer became more evident as 1922 advanced. In June an officer resigned from the Permanent Air Force and the then Director of Personnel and Training (Squadron Leader Anderson[1]) felt obliged to oppose payment of compensation for early retirement from the Service. His explanation was significant: "If compensation were offered there are probably several officers and other ranks whose services could ill be spared, who would avail themselves of the opportunity to resign now, owing to the greatly reduced prospects of promotion etc., brought about by the reduction of the establishments previously approved." The Air Board agreed. Compensation was not paid. Similarly when, in October, the rates of pay for the Citizen Air Force,[2] which was to have at least 25 days' training a year, were reviewed, the Air Board had before it a letter from the Defence Department saying that before these rates were adopted "a serious endeavour

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[8] Air Board Agendum No. 98, 13 July 1921.

[9] The purchase was made to permit development of flying-boat, seaplane and torpedo operations in cooperation with the navy, but a change in policy caused this to lapse and the site was leased for grazing.—Report on Point Cook by Public Works Committee, *Parliamentary Papers* (General) 1922, Vol II, pp. 2387-2407.

[1] AVM W. H. Anderson, CBE, DFC. (1914-18: AN&MEF and 1 and 3 Sqns AFC.) Air Member for Personnel, RAAF, 1940-42, 1944; Comdt RAAF Staff Sch 1943, 1945. Regular air force offr; of Melbourne; b. Kew, Vic, 30 Dec 1891.

[2] Sqn Ldr ("general list"), £1 14s a day; F-Lt, £1 9s; F-O, £1 3s; P-O 18s; Sgt-Mjr, class 1, 16s; AC1 with specialist's pay, 8s.

should be made to secure the personnel at rates of pay which will approximate to those of the Naval and Military Citizen Forces". It is noteworthy that Air Board decided that trainees could not be allotted to the Citizen Air Force, therefore all members must be volunteers.

Another economy measure of the period was the reduction of the Air Board to three members. Later in the year it was agreed that Williams should go to England to attend the Staff College, Camberley, for the 1923 course and then remain in England for attachment to the staff at Air Ministry "for such other instructional duties as may be arranged by him", returning to Australia via America to study aviation there. Goble (who had been at a staff course in England) was appointed acting Chief of the Air Staff in his absence. Ministerial approval for the establishment of No. 1 Squadron—three flights comprising 39 officers and 155 other ranks—was given in November.

In May 1923, the Air Board considered the compilation of a War Book, listing steps to be taken on the outbreak of a war, and asked the Naval and Military Boards whether their requirements had changed since they were enumerated in February 1920. The Naval Board replied that for War Book purposes five flights were needed (this, in very marked contrast to the original assessment of 12½ squadrons, was the result of extreme economies). The Military Board assessed its needs at 20 1/3 squadrons which was one-third of a squadron more than the original claim. On this basis a seven-years plan was drafted; the Air Board drafted a further plan which, by the end of the fifth year, would provide two flights for the navy and five squadrons for army and air force requirements, plus the necessary administrative organisation.

Parliamentary debate on expenditure led to a detailed examination of air force expenditure by the Commonwealth Parliamentary Joint Committee of Public Accounts which produced its report on 3rd July 1923. This committee of 10 members examined 20 witnesses. It was told that in the reorganisation of the Air Board in October 1922 more had been lost than gained—in money the annual saving was £25! Further, until such legislation as the Air Defence Bill became law, only graduates of the Royal Military College, Duntroon, could hold permanent commissions, a fact which was causing discontent and resulting in officers leaving the Service when opportunity occurred. The committee learned too that the greater portion of the gift equipment from Britain had been stored in wheat sheds at Spotswood, near Melbourne, because no other storage was available, and that it was deteriorating there while waiting for proper accommodation to be provided at Laverton.

After examining air force expenditure the committee thought that the money provided had been, on the whole, wisely spent, but the air force could not by any means be regarded as sufficient for the needs of the country. Pressing for early legislative action, the report said that despite keenness and earnestness and despite provision for effective coordination of the military, naval and civil branches, air force administration was

hampered by the absence of powers which alone could give it independence as a force and make it effective. Labour members of the committee submitted a minority report recommending elimination of the private contractor and operation of all aerial services by the Government; naval and military services could be used in a Government mail-carrying plan with advantage to the Government and to the pilots.

On 29th June, four days before the committee's report was published, the legislative action it was so anxious should be taken was resumed with the re-introduction, this time in the House of Representatives, of the Air Defence Bill. The Minister in charge of the bill on this occasion was Mr Bowden,[3] who had succeeded Senator Pearce as Minister for Defence. Bowden opened his second reading speech with quotations from current newspaper reports stating that the R.A.F. had been increased by 34 squadrons and went on to picture unrest among Australian officers. Some of these officers were leaving to take commissions in the R.A.F.; in fact Britain's Air Minister (Sir Samuel Hoare) was quoted as saying how welcome Australian applications for R.A.F. commissions would be.

Mr M. Charlton, the Leader of the Opposition, said that aviation would probably reduce the cost of defence by making it unnecessary for Australia to have a large navy. He revived the argument that military aviation could operate air mail services. Though opposed to the Bill as drafted the Labour party was not against adequate preparation for the defence of Australia.

Mr Marks had some specific statements to make about Japan, which he had recently visited. As the guest of the Japanese Fleet, he said, he had seen its air force at work. At Yokosuka he saw the *Hosho,* the aircraft carrier, one of five Japan would possess, and the 40,000-ton battle cruiser *Akagi*[4] which could carry 50 fighting and bombing planes brought from below decks by electric hoists.

> If Japan should be considered the potential enemy of Australia, as certain sections of our Press would have us believe (he declared), then there is nothing to prevent her . . . from sending the *Akagi* or the *Hosho,* or both, accompanied by her battle-flagship *Nagato,* to Australia, and if she does, who is going to stop her from hauling down our flag? These aeroplanes could fly over Sydney Heads from 100 miles away and Australia would be taken. Japan proposes to spend, between 1923 and 1927, £5,000,000 on her naval air services, and how is she going to spend that money? . . . in three ways—first in the arming of old and new ships with aircraft; second, in increasing the number of her aviators; and third, in study and research in aeronautics and aeroplane making. . . . The Naval Air Force of Japan has been organised by the Master of Sempill, the great British airman, and a number of aviators who distinguished themselves during the war. I find that there is no foundation whatever for the opinion expressed . . . that the Japanese have no "air" or "engine" sense. The Japanese are not inferior to Australians or British—they can fly all right. Their only fault, up to the present, is that

[3] Hon E. K. Bowden, MHR 1906-10, 1919-29; Min for Defence 1923-25. Solicitor; of Granville, NSW; b. Parramatta, NSW, 1872. Died 14 Feb 1931.

[4] As a result of the Washington Treaty, the *Akagi* was converted into an aircraft carrier of 36,000 tons.

they take too many risks. . . . Apart from this the Japanese will become equal to the British or ourselves in the air. . . . A great aeroplane factory has been started for turning out complete aeroplanes. This factory, up to the present, has not fully functioned, but I understand that several fine planes have been constructed.[5]

This was a period when air force advocates stood against stern opposition. In America Brigadier-General William Mitchell and other senior officers were making dramatic claims that bombers could sink the most heavily armed ships and Mitchell was asserting that air power (aided perhaps by submarines) could interdict to any enemy ships all approaches to American shores and hence, in itself, constitute a sufficient protection against invasion.[6] It was rather in this tradition that Mr Green[7] (Labour) quoted in Parliament the dramatic contentions of Rear-Admiral W. F. Fullam, who had commanded the American Fleet in the Pacific during the 1914-18 War. These conjured the passing of sea power and envisaged a puny power, without a navy, challenging the strongest battlefleet. "With intelligent energy" it would make its coast impregnable against a hundred dreadnoughts, holding a maritime enemy 100 miles from its shores, and "chaining aggression, expressed in ships, to the beach".

Then came the battle over the incorporation of the *Air Force Act* which the Bill proposed, as it had when Pearce had presented it. But this time the sound and the fury were much more vehement. Mr Scullin[8] expressed the feeling of the Opposition when he said there was "something decidedly wrong in the principle that a Commonwealth Act of Parliament should be automatically changed by legislation enacted in another part of the world". "Our *Defence Act,* when framed, was not uniform with the British *Army Act,*" he declared, "but was there anything lacking in the methods employed by the A.I.F. because of the absence of that uniformity? The Bill has been drafted with the idea that our air force shall be sent abroad to fight. It is a Bill for the air defence of Australia. . . . The Government are asking us to surrender our political independence as well as the independence of Australia."

The debate disclosed reasons for Labour's advocacy of the air force in preference to the other Services. As contemplated the air force was substantially a Citizen Air Force built up round a nucleus of professional airmen and, as the Air Board had determined that all members of the Citizen Air Force must be volunteers, it was easy to jump the conscription hurdle. In the conception or misconception that an air force was essentially a home defence force operating along the coast, to which quite a number of politicians seemed to subscribe, there seemed an answer to the equally touchy problem of overseas service.

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[5] *Commonwealth Debates,* Vol 103, pp. 1158-9.

[6] William Mitchell, *Winged Defence* (1925).

[7] Hon A. E. Green, MLA, WA, 1911-21. MHR 1922-40; Min for Defence 1929-31; PMG and Min for Works 1931. Of Kalgoorlie, WA; b. Avoca, Vic, 21 Dec 1869. Died 2 Oct 1940.

[8] Rt Hon J. H. Scullin. MHR 1910-13, 1922-49. Prime Minister and Min for Industry 1929-32; Treasurer 1930-31. Of Richmond and Ballarat, Vic; b. Trawalla, Vic, 18 Sept 1876. Died 28 Jan 1953.

The basic objection to the Bill lay in its adoption of the *Air Force Act's* definition of "active service" and this objection was not confined to those on the Opposition benches. Mr F. Anstey put the Labour party's case thus: "We say that the air force shall not be available for the military occupation of any country. We do not favour spending the revenue of Australia to train men for the defence of the country, only to find that in a time of national crisis they have been dispersed to the four corners of the world."[9] To this Mr Latham[1] replied that to suggest that all laws relating to the air force were to cease beyond the three-mile limit round the Australian coast was to reach very nearly the limit of the ridiculous. What the Bill sought to do was exactly what had been and was then the law of the Commonwealth in relation to the army and the navy.

This did not satisfy the Bill's opponents. The Government, by now acutely conscious of its unpopularity for this reason, finally withdrew the measure and made a new approach to the question of air force legislation. On 24th August an Air Force Bill, intended as a temporary measure, was brought down in the House of Representatives. Immediately the Opposition Leader (Charlton) challenged it on the grounds that the Imperial *Air Force Act* still applied. The Defence Minister (Bowden) thereupon undertook to insert a provision that the British *Army Act* (and therefore the Imperial *Air Force Act*) would not apply to the Australian Air Force. Sir Granville Ryrie supported the Minister's undertaking: "A majority in this House and, I believe, a majority of the people outside, are against the incorporation of the *Army Act* in our legislation," he said. Though Labour members voted on party lines against the amended clause—because it did not go far enough—the Bill was passed. In the Senate, Pearce, then Minister for Home and Territories, introduced the Bill which passed all stages with little debate. Pearce told the Senate that the whole contentious question of the Imperial Act would be examined by a committee to decide future policy for the various defence branches and their relation to the forces of the Empire. A stormy legislative passage was over. The Act received Royal assent on 1st September 1923. At last the R.A.A.F. had some statutory foundation.

Early in 1923 applications had been sought from navy and army officers wishing to be seconded to the R.A.A.F. for the first complete course of flying instruction, and subsequent attachment, at No. 1 Flying Training School. Two naval officers, Lieutenants Hewitt[2] and Wackett,[3] R.A.N.;

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[9] *Commonwealth Debates*, Vol 104, p. 1366.

[1] Rt Hon Sir John Latham, GCMG. (Lt-Cdr RANR 1917-20.) MHR 1922-34; Att-Gen 1925-29, 1931-34; Min for Industry 1928-29, 1932-34; for External Affairs 1932-34; Chief Justice, High Court of Aust 1935-52; Aust Minister to Japan 1940-41. Of Malvern, Vic; b. Ascot Vale, Vic, 25 Aug 1877.

[2] AVM J. E. Hewitt, CBE. Director Personal Services RAAF 1940-41; Asst Chief of Air Staff 1941-42; Director Allied Air Intelligence SWPA 1942-43, 1944; AOC 9 Gp 1943; Air Member for Personnel 1945-48. Regular air force offr; of Toorak, Vic; b. Tylden, Vic, 13 Apr 1901.

[3] AVM E. C. Wackett, CB, CBE. Director of Technical Services RAAF 1936-42; Air Member for Engineering and Maintenance 1942-48, for Technical Services 1948-59. Regular air force offr; of Melbourne; b. Townsville, Qld, 13 Aug 1901.

five army officers, including Lieutenants Bladin,[4] Wilson[5] and Ewart,[6] of the Staff Corps, and five civil cadets, one of whom was L. J. Brain,[7] began training.

The scope of flying training, limited as it then was to the course at No. 1 Flying Training School and such operational flying as could be provided by the R.A.A.F's still infant units, using obsolescent aircraft, was widened when the 1923 Imperial Conference opened the way for entry by Australians to short-service commissions in the R.A.F., for the attachment of R.A.A.F. officers to the R.A.F., and for the specialised training of R.A.A.F. officers at R.A.F. schools. This was encouraging news for ambitious R.A.A.F. officers, though there was a sobering thought in the news that, in a drastic reduction of defence expenditure for 1923-24, Britain's air force vote was being cut from £13,000,000 to £9,000,000.

Mr Bruce,[8] who had become Prime Minister in February 1923, gave the wider picture of Empire air forces development when on 27th March 1924 he made his report to Parliament on the Imperial Conference. He said that one of the "guiding principles" laid down at the conference was the desirability of the development of the Empire's air forces by the adoption, as far as was practicable, of a common system of organisation and training and the use of uniform manuals, patterns of arms, equipment and stores (excepting the type of aircraft) in each part of the Empire. The conference had noted also the necessity for the maintenance by Great Britain of a Home Defence Air Force of sufficient strength to give adequate protection against air attack by the strongest air force within striking distance of her shores. But the Prime Minister left no one in doubt about his conviction, "reached after the most exhaustive enquiries", that there was not the slightest foundation for the opinion that the day of the capital ship had passed and that aeroplanes and submarines were a sufficient defence. He heavily emphasised his Government's view that the navy was Australia's primary arm of defence.[9]

An interlude at this stage, with an important bearing on R.A.A.F. prestige, was the first flight round the Australian continent, made by

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[4] AVM F. M. Bladin, CB, CBE. Director of Operations and Intelligence 1940-41; AOC Southern Area 1941-42, North-Western Area 1942-43; SASO 38 Gp RAF 1943-44; Deputy Chief of the Air Staff 1945; Chief of Staff BCOF, Japan, 1946-47. Regular air force offr; of Kew, Vic; b. Korumburra, Vic, 26 Aug 1898.

[5] Air Cmdre D. E. L. Wilson, Comd RAAF Stn Richmond 1939-40, HQ Central Area 1940, 2 Training Gp 1941-42; AOC North-Western Area 1942; comd 1 Training Gp 1942-43, RAF Stns Wyton and Linton-on-Ouse 1943. Regular air force offr; of Sydney; b. Berowra, NSW, 1 Dec 1898. Died 2 Aug 1950.

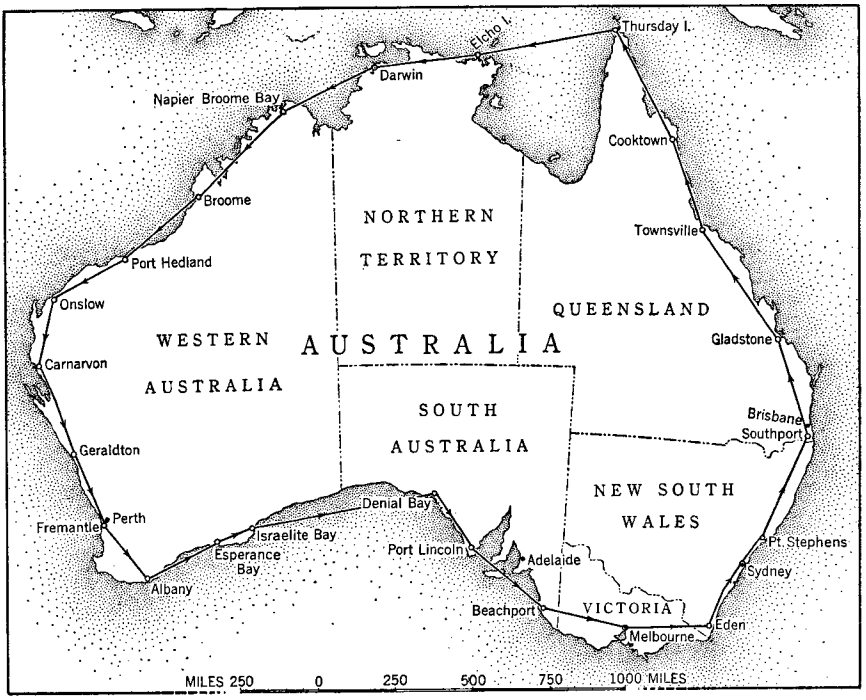
[6] Air Cmdre U. E. Ewart, SASO Southern Area 1940-41; comd 5 FTS 1941; Asst Chief of Staff (Administration) Allied Air HQ 1942; Asst Comdt RAAF Staff School 1943-44; comd Pacific Echelon RAAF GHQ SWPA 1944-45; AOC RAAF Overseas HQ 1946-48; Founder and Comdt RAAF Staff College 1949-52. Regular air force offr; of Melbourne; b. Edgbaston, Eng, 19 Apr 1900.

[7] W Cdr L. J. Brain, AFC, 1370. Qantas Merchant Air Service and Trans Pacific Air Ferry Service 1939-45. Airlines pilot and Operations Manager, Qantas, 1924-46; General Manager TAA 1946-55; Managing Director De Havilland Aircraft Co. since 1955. Of Sydney; b. Forbes, NSW, 27 Feb 1903.

[8] Rt Hon Viscount Bruce, CH, MC. (Lt Worcester Regt 1915; Capt Royal Fusiliers 1916-17.) MHR 1918-29, 1931-33; Prime Minister of Aust 1923-29; High Commissioner for Aust in London 1933-45. B. Melbourne, 15 Apr 1883.

[9] *Commonwealth Debates*, Vol 106, p. 44 *et seq.*

Wing Commander Goble and Flight Lieutenant McIntyre,[1] in a Fairey seaplane. The objects of the flight were to make a reconnaissance of the east coast sea-going defence route to Thursday Island, to test the suitability of the Fairey seaplane for cooperation in a survey of the Great Barrier Reef, and to ascertain the suitability of that type of aircraft for mail carrying. The flight, which began on 6th April 1924, ended on 9th May, an elapsed time of 34 days in which there had been 20 days of



First round Australia flight

flying. The distance covered was 7,186 nautical miles. The Prime Minister later announced in Parliament that in recognition of the feat of these officers—"one of the most wonderful accomplishments in the history of aviation"—the Government would make a gift of £500 to Goble and £250 to McIntyre.

The air force estimates for 1924-25 had been set at £392,394, which included provision of an army cooperation squadron at Richmond, New South Wales, and a seaplane flight at Rushcutter's Bay in Sydney Harbour. What the Air Board described as "only minimum peace reserves" were allowed for.

[1] F-Lt I. E. McIntyre, CBE, AFC. (Flight Sub-Lt RNAS 1917-18.) Regular air force offr; of Tankerton, Kent, Eng; b. Herne Bay, Kent, Eng, 6 Oct 1899. Killed in aircraft accident 12 Mar 1928.

In Parliament, on 1st August, Mr Forde[2] (Labour) moved the reduction of an appropriation of £7,129 for air service works "as an instruction to the Government that all aeroplanes should be built in Australia".[3] He said that "a very enterprising firm", Pratt Brothers,[4] had spent a huge sum of money on up-to-date plant and were prepared to recondition existing air force machinery, to build new military and civil types of aircraft and construct small, light aeroplanes to stimulate public interest in flying.

The Minister for Defence (Mr Bowden) said that in addition to the establishment of an aircraft depot at Laverton, Victoria, which was proceeding, a naval cooperation seaplane squadron was planned for Sydney and the Richmond aerodrome had been purchased from the New South Wales Government.[5] In five years' time there would be four additional air force units, including a flying-boat squadron. A flying-boat designed by an Australian, Squadron Leader Wackett,[6] was being tested.

In September Goble reported that it would be possible to establish by the end of the fifth year only: No. 1 Aircraft Depot at Laverton, No. 1 Flying Training School, Point Cook, a mixed squadron at Laverton, one army cooperation squadron, one single-seater fighter and one light bombing squadron at Richmond. A force of this size was quite inadequate and at the end of the fifth year would still be equipped with 1916-17 types of aircraft. With such an annual appropriation it would be impossible to provide new types.

In December Ministerial approval was given for an increase by four cadets in the intake of the Royal Military College, Duntroon, so that four graduates from each course from 1928 on, could be commissioned in the R.A.A.F. In the meantime the Military Board agreed to make one graduate available in 1925, one in 1926 and four in 1927. These would be additional to the seconded officers (four a year selected from the college graduates) who had been commissioned in the army and, normally, had completed twelve months' attachment abroad. A proportion of these officers transferred as Permanent Air Force officers and the remainder returned to the army after three years' secondment.

An analysis of the *Air Force List* of 1925[7] to determine the principle sources from which the R.A.A.F. was drawing its officers, shows that of a total of 75 Permanent Air Force officers (excluding two in the medical branch) 17 were former members of the Australian Flying Corps, 14 were former R.A.F. or R.N.A.S. members with war service, 12 were

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[2] Rt Hon F. M. Forde. MLA Qld 1917-22; MHR 1922-46. Min for Trade and Customs 1931-32; Deputy Prime Minister and Min for Army 1941-45; Prime Minister July 1945; High Commissioner for Australia in Canada 1946-53. MLA Qld 1955-57. B. Mitchell, Qld, 18 Jul 1890.

[3] *Commonwealth Debates,* Vol 108, p. 2795.

[4] The Aircraft Manufacturing and Supply Co of Australia, Geelong, Victoria.

[5] *Commonwealth Debates,* Vol 108, pp. 2968-9.

[6] W Cdr Sir Lawrence Wackett, DFC, AFC, 1333. (1st AIF: Nos. 1 and 3 Sqns AFC.) Comd RAAF Experimental Stn 1924-30. Manager, later Managing Director, C'wealth Aircraft Corporation. Aeronautical engineer; of Melbourne; b. Townsville, Qld, 2 Jan 1896.

[7] *See* **Appendix 2.**

seconded from the Australian Army, three were on loan from the R.A.N., six were engineering graduates from the universities, or holders of technical college engineering diplomas. The remainder represented a variety of callings, including clerks, farmers, accountants, public servants and business men.

When, on 10th June 1925, the Governor-General opened Federal Parliament, he said that his advisers had noted with pleasure the decision of the British Government to proceed with the construction of the Singapore Base. He also announced the Australian Government's decision to build a seaplane carrier at Cockatoo Island Dockyard, adding that provision had been made for "the aeroplanes and necessary amphibians to equip the seaplane carrier".[8] A week later, Sir Elliot Johnson, speaking on a motion of censure on the Government moved by Charlton as Leader of the Opposition for its plan to build two cruisers, strongly urged the construction of a "much larger type" of seaplane carrier. He quoted reports that Japan's latest carrier, the *Akagi,* had a displacement of 36,000 tons, a speed of 28 knots, ten 8-inch guns, sixteen 4.7-inch guns and was designed to carry 50 aircraft. Britain's largest carrier was 4,200 tons smaller and four knots slower than the *Akagi.*[9]

Air force enthusiasts must have received with satisfaction a pronouncement by Major-General Sir Neville Howse,[1] who had succeeded to the Defence portfolio, and who, speaking on the Defence Equipment Bill on 24th June 1926, declared: "Every strategist now lays it down that the air service should be increased five-fold beyond what was considered necessary in 1924, and that no forward action by an army or a navy should begin without very careful reconnaissance." With this in mind, he added, the work of building a seaplane carrier had been undertaken. It had been estimated that a carrier with modern aircraft added from 400 to 500 miles to the range of any naval force.[2]

Existing air force organisation at this stage was: Headquarters at Melbourne; Liaison Office, London; No. 1 Flying Training School, Point Cook; No. 1 Aircraft Depot, Laverton; No. 1 (Composite) Squadron, Laverton; No. 3 (Composite) Squadron and No. 101 (Fleet Cooperation) Flight, at Richmond; and an Experimental Section,[3] at Randwick, New South Wales.

Ambitious plans for the development of air communications between Britain and Australia were outlined by the Prime Minister when he re-

[8] *Commonwealth Debates,* Vol 110, p. 6.

[9] *Commonwealth Debates,* Vol 110, p. 186.

[1] Maj-Gen Hon Sir Neville Howse, VC, KCB, KCMG. (1st AIF: ADMS 1 Div 1915; DMS AIF 1916-19.) DGMS AMF 1921-24. MHR 1925-30; Min for Defence 1925-27, Health 1925-27, 1928-29, Home and Territories 1928, Repatriation 1928-29. Medical practitioner; of Orange, NSW; b. Stogursey, Somerset, Eng, 26 Oct 1863. Died 19 Sep 1930.

[2] *Commonwealth Debates,* Vol 113, pp. 3525-7.

[3] Experimental Section RAAF was established 14th January 1924 on land and buildings acquired from the RAN. Commanded by Sqn Ldr L. J. Wackett, the section had undertaken construction of flying-boats (designed by Wackett), research and experiments on Australian aircraft materials, modifications to equipment, reconditioning and repair of aircraft, the making of small quantities of urgently needed spares and the technical training of newly-enlisted men.

turned early in 1927 from another Imperial Conference. Britain was opening up a regular air service between Cairo and Karachi, Mr Bruce said, and he had indicated to the conference that Australia would be prepared to cooperate in experimental flights between Australia and Singapore by trying to establish heavier-than-air communication with that country as part of an eventual route between Britain and Australia. Australia had, in fact, done far more than any other part of the Empire in the development of commercial and passenger-carrying air services. The route from Cairo to Karachi and the service by defence planes between Cairo and Iraq, over approximately 800 miles, were regarded as great achievements, but he had been happy to tell the conference that for some years Australia had maintained a commercial and passenger-carrying service over a route 1,400 miles long. The conference had recognised that in the air a new arm of defence had developed and that to the British Empire with its widely scattered territories and its commerce traversing the trade routes of the whole world, air routes and bases would probably be as important in the future as fleets and naval bases had been and still were.

By June 1927 Ministerial approval had been given for the purchase of two Supermarine "Southampton" flying-boats to permit the R.A.A.F. to cooperate with the R.A.F. which planned to send four "Southamptons" to Singapore and thence to Australia on a special service mission.

A statement by the Chief of the Air Staff, Williams, published on 19th July 1927, which declared "our machines are quite good for training, but not adequate for defence", may well have been a gentle reminder of a somewhat grim report, two months earlier by the Chief of the General Staff, Lieut-General Sir Harry Chauvel, in which he stated that circumstances might well arise that might prevent the naval forces of the Empire being available for the defence of Australia and that it was incumbent on Australia to provide effectively for her own local security—an accepted principal of Imperial defence. Under such conditions, Chauvel observed, the principal instruments of local security for Australia must necessarily be the army and the air force. The statement by Williams prompted a question by Charlton in Parliament, and brought the reply from the Prime Minister that the supply of gift equipment was becoming exhausted and a "commencement" was being made with re-equipping the R.A.A.F's service units and portion of the Flying Training School with more modern aircraft.

A review of air force training and development in 1927 showed that 13 pilots had been trained for the Permanent Force and 9 for the Citizen Force while, at the end of the year, 22 were under training for the Permanent Force. Seven pilots had been trained for short-service commissions in the R.A.F. and a further 6 were being trained for that purpose. No. 101 Flight had cooperated with H.M.A.S. *Moresby* in surveying the Great Barrier Reef. The Experimental Section had been at work producing the "Widgeon" flying-boat. Orders for the latest type of army cooperation aircraft and for light day bombers had been placed in Britain and the

purchase of new trainers was under review. Two commercial companies—West Australian Airways and Queensland and Northern Territories Aerial Services Limited (Qantas)—had established small flying schools, one at Perth and two in Queensland (Brisbane and Longreach). A bonus of £40 was paid to the companies for each pilot trained. Two other commercial companies had begun operations in New Guinea. Six civil air routes aggregating 3,500 miles were operated by commercial companies in Australia and their aircraft had flown a total of about 500,000 miles in the year. The Australian Aero Club, operating at Sydney and Melbourne, was receiving £20 for each pupil trained. By the end of September 60 pupils (including three women) had gained private pilot's licences.

Australia's status in aviation rose appreciably early in 1928 when Herbert Hinkler[4] made his 16-days flight from England to Australia. The Prime Minister supplemented a eulogy of the man who had made this "great and historic flight" with a gift of £2,000 on behalf of the Commonwealth. The day after Hinkler's landing in Australia the R.A.N's new and first seaplane carrier, *Albatross,* was launched at Cockatoo Island Dockyard.

In March the Air Board considered a report on Wackett's "Widgeon" which said that there was no great demand for this type of aircraft in Britain and only one British manufacturer was working on such an aircraft. Probably it would be necessary to have drawings prepared and tenders invited locally to obtain some idea of its price.

If the air force was not making very spectacular progress in those days, at least it was attracting the attention of potential recruits. For course "A" in 1928 which was to provide for the training of 35 pupils (8 vacancies being restricted to airmen candidates) 250 applications were received. But the physical and educational standards demanded were high and only 44 passed the preliminary selection tests. Medical tests reduced this number to 26 and of these only 8 passed as fit for flying duties, 3 being accepted as cadets and 5 for training as airmen pilots.

On 9th June Kingsford-Smith[5] and Ulm[6] landed at Brisbane, completing the first flight across the Pacific Ocean—6,928 miles in 83 hours, 38 minutes flying time—and adding another achievement to Australia's mounting record in world aviation. Kingsford-Smith followed this on 11th

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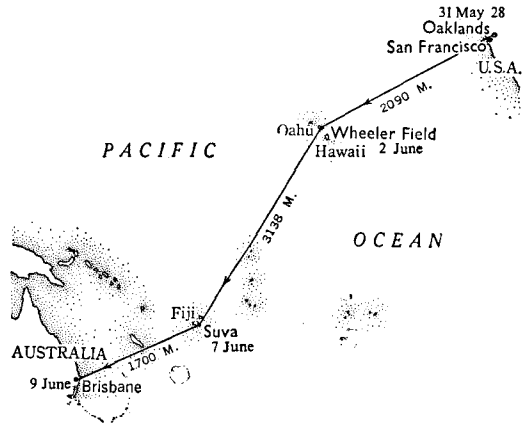
[4] Sqn Ldr H. J. L. Hinkler, AFC, DSM. (1914-18: 28 Sqn RAF.) Of Bundaberg, Qld; b. Bundaberg, 8 Dec 1890. Killed in aircraft accident in Italy, 7 Jan 1933.

[5] Air Cmdre Sir Charles Kingsford-Smith, MC, AFC. (1st AIF: Signal Service and 23 Sqn RFC.) Joint founder of Aust National Airways Ltd 1928; of Neutral Bay, NSW; b. Hamilton, Qld, 9 Feb 1897. Lost at sea, while flying from Rangoon to Singapore, 8 Nov 1935.

[6] F-Lt C. T. P. Ulm, AFC. (1st AIF: *Nom de guerre* Charles Jackson, 1 Bn 1914-16. Wounded, returned Australia and re-enlisted 45 Bn 1916-18.) Joint founder and director of Australian National Airways Ltd 1928; of Lavender Bay, Sydney; b. South Melbourne, 18 Oct 1897.
In June 1927, Ulm, with Kingsford-Smith made a record-breaking flight (7,539 miles) round Australia in 10 days 5½ hours. He was organiser and co-commander for the trans-Pacific flight of the *Southern Cross* in June 1928, for the non-stop flight from Melbourne to Perth in August, and for the to-and-from flights between Australia-New Zealand in September of the same year. In June 1933 he flew an Avro *X* (*Faith in Australia*) on another record-breaking flight (6 days, 17 hours, 56 minutes) from England to Australia. In April 1934, he flew the first official airmails both to New Zealand and New Guinea. Ulm was lost at sea, on 4th December 1934, several hours after taking off from Oakland, California, on a flight to Australia.

September with another memorable trans-ocean flight, the first air crossing from Australia to New Zealand—Sydney to Christchurch, by way of Wellington, 1,630 miles in 14 hours, 25 minutes.

As the year advanced the British squadron of "Southampton" flying-boats came, showed the flag in the Pacific, and went its way again after providing a highlight in R.A.F.-R.A.A.F. operational coordination which gave valuable experience. But the R.A.A.F's squadrons were still flying aeroplanes that had been "modern" when the last shots were being fired in the First World War a decade before. These were the outdated gift aircraft from Britain, and it must have been with incredulity that the pilots and trainees learned that, for the rearming of Nos. 1 and 3 Squadrons, an order had been approved for 32 Westland "Wapiti" aircraft —aircraft that had just come into use in the R.A.F.



First trans-Pacific flight

CHAPTER 2

SALMOND TO ELLINGTON

CLEARLY apparent to the Government at this stage were the material shortcomings of the R.A.A.F. and the inevitability of heavy financial commitment before these were overcome. The Government decided that an outside opinion was needed and, on 2nd July 1928, Air Marshal Salmond[1] of the Royal Air Force arrived in Melbourne at the Government's invitation to examine and report on the organisation, administration, training and general policy of the Australian force.

Salmond was given three terms of reference: to examine and report on the equipment and training policy and make recommendations on them; to examine and report on the organisation, administration and general policy of development; to advise on the employment of the R.A.A.F. in the defence of the Commonwealth. The first two terms were covered in Part I of his report which became a public document and the third formed the basis for Part II of the report which remained a secret document for reasons of national security.

The report, dated 20th September 1928, began in sympathetic vein by observing that the defects found in the force were due largely to the immense difficulties inseparable from the task of building up an air force in its initial stages and without properly established organisation and bases. No. 1 Squadron and No. 3 Squadron, each with approximately one-third regular and two-thirds Citizen Force men, were the only operational units designed to undertake war operations in cooperation with the army or the navy, should the need arise. For this the R.A.A.F. was totally unfit because of the obsolete service machines in use, the entire absence of any reserve equipment, and the low standard of training in the two squadrons.

Salmond emphasised that full value from costly and perishable equipment could not be obtained by units, chiefly Citizen Force, which received only 25 days' training a year.[2] The mixed composition of Nos. 1 and 3 Squadrons (each had one army cooperation, one bomber, and one fighter flight) led to maintenance and training difficulties. The reason for their mixed composition was a desire to gain skill in as many air force tasks as possible, and retain the capacity to form a complete squadron round each flight later. Salmond did not find in the squadrons the stability to justify this policy and recommended one service type of aircraft and one operational role for each squadron. The standard throughout the force was low. Officers were very well trained at No. 1 Flying Training

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[1] Marshal of RAF Sir John Salmond, GCB, CMG, CVO, DSO. Comd RFC and RAF in Field 1918-19; Chief of Air Staff 1930-33; Director of Armament Production and Dir-Gen Flying Control and Air Sea Rescue 1939-45. Of London; b. 17 Jul 1881.

[2] This was the prescribed period for training in the defence forces, under the compulsory training plan then in operation.

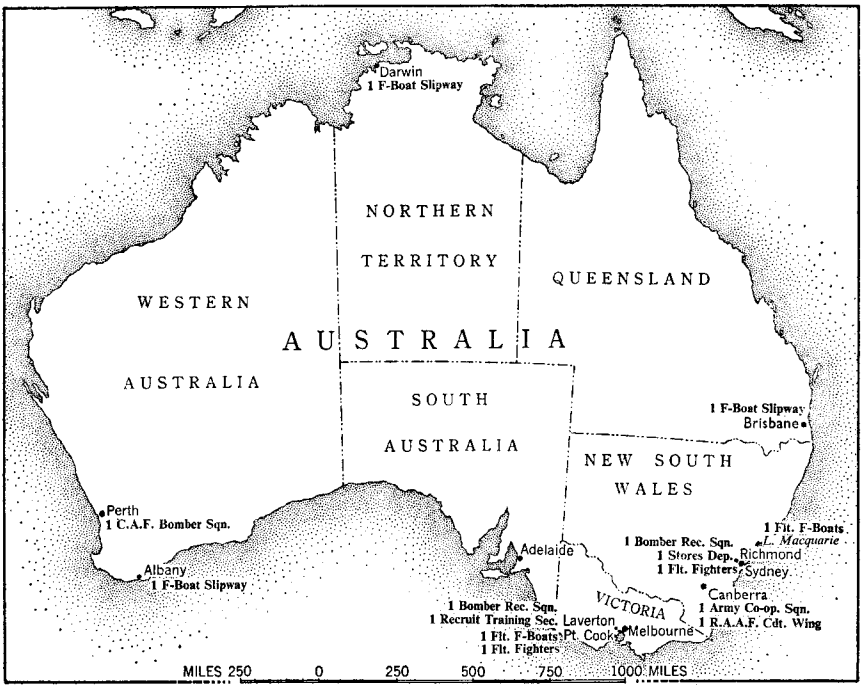
School, but were denied further practice and training because of the insufficiency and inadequacy of aircraft. He examined closely the existing system of commissioning by which Permanent Force officers in the general duties (flying) branch held either permanent or short-service commissions in the R.A.A.F. or were seconded from the navy or army for three years while holding a permanent commission in their parent Service.[3]

Since the formation of the force, he wrote, when a certain number of Staff Corps and war service officers were granted permanent or short-service commissions, a majority of the officers awarded permanent commissions had been regular officers of the navy and army who had transferred to the R.A.A.F. after secondment, certain suitable short-service commission officers, and certain cadets from the Royal Military College who volunteered or nominated for service in the R.A.A.F. after graduation. Transfer after secondment, Salmond found, nullified the advantages of the very principle of secondment, and the same weakness applied to the commissioning of Duntroon cadets if more than a few were given permanent commissions. He proposed, therefore, establishment of a R.A.A.F. Wing at Duntroon with a three-year instead of a four-year course. The number of cadets required annually was six; this number, supplemented annually by a small entry from the universities to fill technical posts, and the promotion of a proportion of the officers with short-service commissions, would provide all the regular officers needed. About half of the junior officers should hold only short-service commissions to ensure three things: a steady flow of young, fully trained officers to the Reserve, a reasonable prospect of promotion and a career for the regular, and the absence of any need for a large number of "unemployed list" officers. The obligation on candidates for commissions in the Citizen Air Force to undergo four months' continuous training at No. 1 Flying Training School largely limited the field of selection to university students. Citizen Force officers, he proposed, should in future be trained in the squadron most convenient to their university—Melbourne University trainees at No. 1 Squadron, Laverton, and Sydney University trainees at No. 3 Squadron, Richmond. If, as seemed possible, the number of university candidates fell short of requirements, other volunteers could be selected for training in the same districts. If the candidates for commissions were not restricted to compulsory trainees it should be possible to gain some advantage from the flying activities of the aero clubs.

Salmond found that in the previous two years 10 officers (all flying instructors) and 136 airmen had voluntarily left the Service, attracted by offers of civilian employment. Improved conditions, including an annual gratuity supplementary to deferred pay and payable on retirement, longer leave periods, higher pay (which already was being considered by the Air Board), and the increase of accident benefits for the Citizen Air Force to the Permanent Force level, all seemed advisable.

[3] The period for short-service commissions was four years on the active list and four years on the Reserve while Citizen Force officers served for eight years, four of which might be on the Reserve.

Salmond recommended the establishment and complete equipment within nine years of the following new regular units: one flight of single-seater fighters at Point Cook, and another at Richmond; one flight of coastal reconnaissance flying-boats at Point Cook and another at Lake Macquarie, New South Wales, using the "almost continuous series of lakes and protected waters close to the eastern seaboard for a distance of 2,000 miles from Melbourne to Townsville"; one bomber reconnaissance squadron at Richmond and one at Laverton, which might use torpedo-carrying aircraft once these had been stabilised; a R.A.A.F. cadet wing at the



The Salmond Plan

Royal Military College, Duntroon; an army cooperation squadron with a training flight for the Duntroon cadets, at Canberra; a stores depot at Richmond and a recruit training section at Laverton. In addition, he recommended the formation of a Citizen Force bombing squadron at Perth and construction of three flying-boat slipways, one each at Albany (Western Australia), Brisbane and Darwin.

The Experimental Section at Randwick, near Sydney, Salmond found to be without justification, unless the Government was prepared to set up an experimental factory where new types of aircraft might be produced and the successful ones put out to contract. Unless such a policy,

at considerable and recurring cost, was adopted, he recommended that the section's function as a factory cease and that the reconditioning work be done elsewhere. Skilled work of a very high order and ably directed had been done. Two "Widgeon" amphibians and one training aircraft of experimental type (the "Warrigal") had been produced in addition to a large number of propellers and fittings and some aeroplanes and engines had been reconditioned. If the object of the building of these machines was to prove that it was possible to build aircraft entirely or almost entirely from Australian materials, that object had been attained.

Development of air routes—"a considerable measure of defence against hostile seaborne raid attack"—was also recommended by Salmond, who said that maintenance of the closest possible cooperation between the air force and civil aviation was imperative.

The first step in putting Salmond's recommendations into effect was the granting in January 1929 of Ministerial approval for an order for six Bristol Bulldog single-seater fighters for a fighter flight at Point Cook. Early in February 1929, in the course of his speech at the opening of a new Parliament, the Governor-General said that in the framing of financial proposals for the coming year, Salmond's recommendations would receive consideration.

The Government's task in translating the Salmond plan into fact had to be considered against a background of grim economic pressure, and much hopeful talk of the possible outcome of the signing of the Kellogg Pact. Allowing for these influences, Parliament's reception of the plan was favourable, though there was an interesting critical sidelight when Mr Theodore[4] complained that the closing of the Experimental Section would be a "tragic blunder". He said gross hardships were being imposed on those engaged in the production of aviation requirements. Had it not been for the section no adequate test could have been made in Australia of the Harkness light aero-engine then being produced in Sydney. If no other way for the founding of the aircraft industry in Australia was possible, then its establishment by Government enterprise would be justified. There was nothing occult or mysterious about the building of an aeroplane, no long tradition behind the industry, and Australia was able to compete on equal terms with any other country.[5]

The Prime Minister, Mr Bruce, said that the Government had hoped that on completion of the current five-year defence program (in the fiscal year 1928-29) the three-year plan recommended by Salmond would begin, but the finances of the country would not permit further expansion and the Government had to be content with maintaining what it had. The Government's view was that the sea was Australia's first line of defence.

To Theodore's criticism, Bruce replied that Australia had not yet reached the stage at which it could manufacture the aircraft it needed—

[4] Hon E. G. Theodore. MLA Qld 1909-25; Premier and Treasurer 1919-25. MHR 1927-31; Treasurer 1929-30, 1931. Dir-Gen Allied Works Council 1942-44. B. Port Adelaide, 29 Dec 1884. Died 9 Feb 1950.

[5] *Commonwealth Debates*, Vol 121, pp. 296-7.

it had not even reached the stage at which it could produce an engine for a motor-car. All the great nations were spending millions of pounds in developing aviation and Australia could not hope to keep abreast, let alone ahead of these developments.[6]

But Bruce's responsibilities, as Prime Minister, for the program in hand were soon to end. Three weeks after this speech Parliament was dissolved, and on 20th November the Scullin Government was occupying the Ministerial benches and the House was listening intently while the Governor-General, opening the new Parliament, announced the suspension of compulsory military training, and, in keeping with Labour's consistent advocacy of a strong air force, gave the R.A.A.F. specific attention. "The question of maintaining a separate organisation for the air force, having been brought under the notice of my Ministers," he said, "the Defence Committee was instructed to investigate and report to the Council of Defence. No decision was arrived at by the council, the matter being postponed pending a comprehensive review of the position of the air force. My Ministers have, however, asked for a report on the possibility of coordinating the work of the air force with that of civil aviation."[7]

Behind this somewhat oblique statement on "the question of maintaining a separate organisation for the air force", was a very drastic proposal that the navy and the army should have separate air arms. Major-General Sir William Glasgow,[8] who had just relinquished the Defence portfolio, took the opportunity offered by the Address in Reply to challenge this. Arguing in favour of one coordinated force with a three-fold purpose—independent operations, army cooperation and naval cooperation—he said that the navy as it then was would require only about 15 aircraft. He hoped that the Government did not intend to cut the already diminutive air force into "separate, distinct entities" for the two other Services. He added emphatically that the air force and civil aviation were "absolutely different and distinct".[9] Mr Latham, as Leader of the Opposition, asked, with some display of incredulity, what officers of the Defence Department had brought the matter to the notice of Ministers.[1] Mr Scullin assured him that the suggestion had come from officers in both the army and the navy with the officers of the air force dissenting.

That those in command of the R.A.A.F. were genuinely afraid that the Government might yield to pressure from the other Services and split the air force was indicated by Mr White[2] who, a week later, told the

[6] *Commonwealth Debates*, Vol 121, p. 298.

[7] *Commonwealth Debates*, Vol 122, p. 8.

[8] Maj-Gen Hon Sir William Glasgow, KCB, CMG, DSO. (1st AIF: GOC 1 Aust Div 1918.) Senator 1920-32. Min for Home and Territories 1926-27, Defence 1927-29. High Commissioner for Aust in Canada 1939-46. Grazier; of Gympie, Qld; b. Tiaro, Qld, 6 Jun 1876. Died 5 July 1955.

[9] *Commonwealth Debates*, Vol 122, p. 58.

[1] *Commonwealth Debates*, Vol 122, p. 96.

[2] Gp Capt Hon Sir Thomas White, KBE, DFC, 250875. (1st AIF: 1st Half-Flight AFC.) Comd 1 ITS 1940-41, RAAF Stn Bournemouth 1941-42; RAAF Liaison Offr Training Cd, RAF, 1942; comd RAF Stn Brighton 1943. MHR 1929-51; Aust High Commissioner in UK 1951-56. Of Melbourne; b. North Melbourne, 26 Apr 1888. Died 13 Oct 1957.
(When war broke out in 1939 White was a lieut-colonel on the Unattached List of the Australian Military Forces, in which he had commanded a battalion from 1926 to 1931.)

House of Representatives that if the force was split it would be set back a decade in development. To abolish the Air Board and divide the air force between the army and navy would duplicate training staffs, material and men.[3] The new Defence Minister, Mr Green, said later that it was not the Government's policy to amalgamate the air force with the army and the navy. If it had any predilection at all, it was in favour of keeping the air force separate. But he kept the contentious issue bubbling by adding: "However, if we can preserve efficiency and at the same time save money by amalgamation, the proposal will be considered. Already a committee has been set up . . . for the purpose of amalgamating the financial control of the different branches."[4]

In June 1930, however, Green, in a review of Defence Department retrenchments, gave an assurance that air force units and establishments would be maintained. Since no difficulty had been experienced in keeping the two Citizen Force units at full strength under the voluntary system, no reduction in air force activities had taken place.

Australian aviation gained impetus from the achievement of Kingsford-Smith on 24th June, in making the first east-west crossing of the Atlantic by air (in 31½ hours). The Australian Prime Minister cabled Kingsford-Smith announcing his promotion to the honorary rank of wing commander in the R.A.A.F. in recognition of his achievement.

The keenness with which expenditure was being cut was illustrated in July when the Air Board recommended that only one officer (Squadron Leader Lukis[5]) instead of two should be nominated for the 1931 R.A.F. Staff College course. This was adopted despite the fact that the cost of such courses was met from a fund in London established by credits from the Air Ministry on payments for the training in Australia of short-service commission officers for the R.A.F.[6] At this stage the R.A.A.F. had 104 officers, 782 other ranks and 26 first-line aircraft. When, in July, Mr Scullin himself took over the Treasury portfolio following the resignation of Mr Theodore, he announced that the R.A.A.F. had been reduced by 3 officers and 34 airmen, but as the force had been working below establishment no dismissals were entailed.[7]

In August the British airship *R-100* flew from Britain to Canada and back. Two months later (5th October) the protagonists of the lighter-than-air craft were deeply shaken in their convictions by the news of the loss of the British airship *R-101* on a flight to India in which the dead included

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[3] *Commonwealth Debates,* Vol 122, p. 1230.

[4] *Commonwealth Debates,* Vol 122, pp. 1233-4.

[5] Air Cmdre F. W. F. Lukis, CBE. (1st AIF: 10 LH Regt and 1 Sqn AFC.) AOC North-Eastern Area 1941-42; Air Member for Personnel 1942-43; AOC 9 Gp 1943-45. 2 Training Gp 1945. Regular air force offr; of Balinjup, WA; b. Balinjup, 27 Jul 1896.

[6] Australia and Britain had an agreement (made at the 1923 Imperial Conference), by which 10 cadets were selected annually, trained as pilots in Australia, and on graduation were sent to Britain to hold short-service commissions in the RAF for four years. The Commonwealth received £1,500 for each pilot so trained.

[7] *Commonwealth Debates,* Vol 125, p. 3894. In the preceding 12 months the RAAF had accepted 33 cadets to fill vacancies and provide for the normal wastage in the flying training courses for short-service commissions in the RAF and RAAF. Of these five had been discharged as not temperamentally suited to flying.

the British Secretary of State for Air, Lord Thomson.[8] Also in October Kingsford-Smith again achieved a notable success when, leaving England on 9th October, he landed at Darwin after a flight of 9 days, 21 hours and 40 minutes. Again the Government conferred higher honorary rank on him, this time that of air commodore.

By March 1931 we find Mr Chifley,[9] a new Minister for Defence, telling a questioner in Parliament of Australia's experiments in the construction of Service aircraft—a picture of trial, error and some accomplishment which, because of prohibitive costs at a time when the Treasury was disturbingly empty, could make no greater contribution than Salmond had predicted.[1] In this period, too, experimental flights were made which laid the foundations for a memorable and lasting international air service partnership. These were made between England and Australia by Imperial Airways Limited, at the instance of the British Government and without cost to Australia. Qantas Limited provided the Brisbane-Darwin connecting link.

Again the political wheel turned. February 1932 saw the opening of the 13th Parliament with the newly-formed United Australia Party led by Mr Lyons[2] in office. This time the Governor-General's speech made no reference to defence beyond the hopeful and highly significant statement, "My Ministers consider that the Disarmament Conference is one of the most vitally important international conferences that has yet been held. A real reduction and limitation of armaments would make a great contribution to the peace and welfare of humanity. The problems of disarmament have a fundamentally important bearing on the well-being and progress of our Commonwealth."[3] So much for the hopes. But, as the historian Toynbee had noted (only a few months earlier) the Japanese people "racked by the remorseless turning of the economic screw . . . had followed the lead of the Japanese Army in reverting from the policy of commercial expansion to the policy of military conquest".[4] One month after the Governor-General had spoken, Japanese forces were attacking the Chinese at Shanghai, a fact which, apart from its denial of hope of world disarmament, prompted an emphatic reiteration in the Australian Parliament of Labour's opposition to oversea service.

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[8] Sqn Ldr W. Palstra RAAF was among those killed.

[9] Rt Hon J. B. Chifley. MHR 1928-31, 1940-51. Min for Defence 1931-32, for Post-War Reconstruction 1942-45; Treasurer 1941-49; Prime Minister 1945-49. B. Bathurst, NSW, 22 Sept 1885. Died 12 Jun 1951.

[1] "Widgeon I", an experimental amphibious aircraft designed by Wackett on the recommendation of the Controller of Civil Aviation (Brinsmead) for civil use but later used by the air force for training seaplane pilots, was struck off charge when no longer serviceable. "Widgeon II", a development of "Widgeon I", was also produced for civil use and had completed 130 hours of flying, including a flight round Australia, when in tests at Point Cook it met with an accident involving loss of life. "Warrigal I" was an experimental landplane, designed to reduce the cost of air force training, but a lighter and cheaper aircraft had been developed in Britain and was adopted for training in the RAAF. "Warrigal I" was damaged in a landing and was not rebuilt.

[2] Rt Hon J. A. Lyons, CH. MHA Tas 1909-1929, Premier 1923-28. MHR 1929-39; PMG and Min for Works and Railways 1929-31; Treasurer 1932-35; Prime Minister 1932-39. B. Stanley, Tas, 15 Sep 1879. Died 7 Apr 1939.

[3] *Commonwealth Debates*, Vol 133, p. 6.

[4] A. J. Toynbee, *Survey of International Affairs 1931*, Pt IV, Sec 1 (1932), p. 403.

The ghost of lost autonomy, which had haunted the R.A.A.F. for nearly three years, was laid in September by Pearce, back in office as Minister for Defence, who said the question of merging the Naval, Military and Air Boards had been investigated, but it "was not considered desirable to take the action suggested".[5]

An outcrop of rumours and reports of "mysterious strangers spying out the land" in the coastal areas of the Northern Territory occurred early in 1933. Mr H. G. Nelson, Parliamentary representative for the Northern Territory, referred to these reports in the House and sought an assurance from the Government that a patrol boat or seaplane would be dispatched to the area to investigate them and that the Darwin garrison would be strengthened. He was told that the reports were not confirmed and that the circumstances did not warrant dispatch of a patrol boat or seaplane. The question of a suitable garrison at Darwin was being considered. Darwin, at this time, was coming into notice as Australia's northern doorway. In March, Imperial Airways and Qantas were associated in tendering for the air mail contract for the proposed Brisbane-Singapore route. Soon afterwards, an Imperial Airways four-engined aircraft visited Australia on a goodwill and survey mission. In July the London-Karachi service of Imperial Airways was extended to Calcutta and in December to Singapore.

January 1934 was an important month for civil aviation development with a defence significance. It marked the formation of Qantas Empire Airways, an organisation in which Imperial Airways became directly associated with the pioneering Australian company and accepted a substantial shareholding. In April the new company secured a five-year contract, in open tender, for the Brisbane-Singapore air mail service.

In July 1934 the Government's decision to purchase a cruiser from Britain for £2,250,000 prompted Latham to anticipate the old "aircraft before warships" argument by saying that reliable expert opinion claimed that warships were a necessary protection against raids and attacks on commerce. One of the fundamental dangers of relying wholly upon aircraft and shore defences was that their action was affected, often vitally, by the weather; ships were not subject to the same disadvantage. But, despite the mounting naval program, Pearce was able to announce in August provision for 18 Hawker Demon aircraft, the latest type advised by the British Air Ministry and senior R.A.A.F. officers, and 24 Seagull

[5] In the light of subsequent associations it is of interest to note that in the United States the struggle for air force autonomy was seen to have failed as a result of the ineffectiveness of the *Air Corps Act* of 1926 and the refusal of Congress to accept any one of 29 bills introduced between 1926 and 1935 to achieve reorganisation. Thus many leading officers in the Service concluded that the fight for independence was hopeless and decided to strive for a more limited objective—the formation of what was termed a GHQ Air Force in which offensive aviation might be concentrated under one command, thus achieving for that force a more or less independent mission. The GHQ Air Force did not, in fact, gain permanent status until 1st March 1935 and then only after protracted and, from the viewpoint of autonomy-minded airmen, extremely discouraging official investigations. The US Air Force did not achieve complete autonomy until 1947, although great war-time progress was made towards this goal. (For a detailed examination of this subject see W. F. Craven and J. L. Cate (Editors), *Early Plans and Operations, January 1939 to August 1942* (1948), Ch II of Vol I in the official series *The Army Air Forces in World War II*; and M. S. Watson, *Chief of Staff: Prewar Plans and Preparations* (1950), Ch IX, in the official series *United States Army in World War II.*

Mark V (later Walrus) seaplanes, made to R.A.A.F. specifications. Under the contract of purchase Australia would receive copies of all the plans of the latter machines. In addition provision was made for carrying out the remainder of the first portion of the Salmond plan: technical equipment (including aircraft engines), motor transport, ammunition and stores —£162,400; buildings, works and sites—£88,600. From this provision two general purpose squadrons, a wing headquarters, with stores depot, aircraft repair section and engine repair section would be formed at Richmond, New South Wales; one general purpose squadron at Laverton; a coastal reconnaissance flight at Point Cook and a Citizen Air Force squadron at Perth. With the arrival of the new aircraft it would be possible to recommission H.M.A.S. *Albatross* and equip her with modern aircraft in place of her obsolete Seagulls. In addition the cruisers of the R.A.N. Squadron and the *Albatross* were being fitted with aircraft catapults.

The increasing speed and range of aircraft was demonstrated in 1934 by the Melbourne Centenary Air Race, in which a prize of £10,000 was won by C. W. A. Scott and T. Campbell Black who flew a de Havilland "Comet" from Mildenhall to Melbourne in 2 days, 22 hours, 54 minutes, 18 seconds! One commentator of the day said of the race: "Not the least of the services that Sir MacPherson Robertson gave to Australia in promoting the Centenary Air Race (he also provided the £10,000 prize), was to bring home to us that southern Australia is within two days' range of Europe for a cargo-carrying machine. If Melbourne is within two days of Europe northern Queensland is within ten hours of the Japanese islands and the southern capitals are within non-stop range. . . ."[6]

Another civil aviation event of importance was the next stage in the development of the England-Australia air service—the dispatch by the Duke of Gloucester on 10th December of the first scheduled Qantas airliner on the Brisbane-Singapore section of the England-Australia route. The Singapore-London section was operated by Imperial Airways.

In March 1935 observers noted the announcement of the official constitution of the German Air Force and, only a few days later, Hitler's significant addendum to this—a statement in Berlin that Germany had already reached air parity with Britain! Promptly, in May, proposals were laid before the British Parliament for the increase in the strength of Britain's first-line aircraft to 1,500 by 1937. This was not such a huge program as it may have seemed at the time to air-conscious critics in Australia, for the British first-line aircraft strength even then was 1,020:[7] Home Defence 580, Fleet Air Arm 175, India 96, Egypt and the Sudan 60, Iraq 51, Aden 12, Palestine 12, Malta 6, and Singapore 28. But the effect of the British proposal for increased air strength had its Australian reflection in personal correspondence which took place in October and

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[6] "Albatross" (E. L. Piesse), *Japan and the Defence of Australia* (1935), p. 50.

[7] In Air Ministry parlance "first-line" denoted aircraft available to operational units ready for immediate flight but not including reserves. The RAAF adopted the same definition.

earlier, between the British Chief of the Air Staff (Air Chief Marshal Sir Edward Ellington[8]) and Air Commodore Williams. Ellington wrote asking whether additional Australian pilots and other ranks could be obtained for the R.A.F. Williams replied that, apart from any question of Government policy, the low rates of R.A.F. pay would not attract Australian tradesmen, and that, though large numbers of young men would probably offer for training for short-service commissions in the R.A.F., few would be willing to pay their own fares on the chance of qualifying as pilots. The practical course, Williams wrote, seemed to be to adhere to the existing agreement and continue the training of pilots in Australia for the R.A.F. The Air Board, reviewing this correspondence, was quick to note the advantages in this last proposal. It would allow for the maintenance of a much larger R.A.A.F. training establishment, keep the Service more up to date technically through the more rapid use of aircraft, and establish a larger credit in London (payments by Air Ministry for Australian training) with which new aircraft could be bought.

Ellington replied that the Air Ministry would request officially that the number of pilots trained in Australia for the R.A.F. should be increased from 15 to from 20 to 25 a year, but that for 1936 the R.A.F. would be prepared to take up to 50 pilots. By this time the Air Board had become increasingly conscious of a need of its own—a need for more technical officers. It recommended to the Minister that one officer should be sent to each R.A.F. armament, signals and engineering course and one to every second photography and navigation course.

About this time the first really effective action was taken to develop the Australian aircraft industry when, at the instance of Mr Essington Lewis,[9] then managing director of the Broken Hill Proprietary Company Limited, the Government convened a conference at which plans were made for the formation of a syndicate that was soon to initiate establishment of factories to make aircraft and engines.[1]

Such progress was made in 1934-35 with the first part of the Salmond plan that the Minister for Defence (Mr Archdale Parkhill[2]) was able to announce in November that in January 1936 the first section of No. 2 Aircraft Depot at Richmond would be formed; in April the two new squadrons (one at Richmond and one at Laverton) would be established and, in addition, No. 101 Fleet Cooperation Flight would become a full squadron in that month. This development would entail an increase in the permanent strength of the force of 563.

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[8] Marshal of RAF Sir Edward Ellington, GCB, CMG, CBE. Chief of Air Staff 1933-37; Inspector-General of RAF 1937-40. Of Richmond Hill, Surrey, Eng; b. 30 Dec 1877.

[9] Essington Lewis, CH. Managing Director BHP 1926-38, Chief General Manager 1938-50; Dir-Gen of Munitions 1940-45 and Dir-Gen Aircraft Production 1942-45. Of Melbourne; b. Burra, SA, 13 Jan 1881.

[1] The companies from which the syndicate was formed were: Broken Hill Pty Co Ltd, Broken Hill Associated Smelters Pty Ltd and General Motors-Holden's Ltd.

[2] Hon Sir Archdale Parkhill, KCMG. MHR 1927-37; Min for Home Affairs and for Transport 1932, Interior 1932; PMG 1932-34; Min for Defence 1934-37. Of Bellevue Hill, NSW; b. Paddington, NSW, 27 Aug 1879. Died 3 Oct 1947.

Towards the year's end the issue of national defence had reached such important dimensions that Parkhill made an official statement which set out the Government's policy in detail and analysed the program for each of the Services. In this he explained that the average annual defence expenditure during the five-year program which ended in 1928-29 was £6,700,000, but at the depth of the depression this fell to £3,200,000. The Government's first aim had been to restore the forces and provision was made in 1933-34 for an additional expenditure of £1,500,000. Under the three-year program, adopted in 1934-35, provision was made for an additional expenditure of £8,000,000 mainly for development and the average annual expenditure in this period would be £6,500,000. The program's objective for the air force was practically to complete Part I of the Salmond plan, providing: in Victoria—Headquarters, No. 1 Flying Training School, No. 1 Aircraft Depot, No. 21 (Citizen Air Force) Squadron for cooperation with fixed defences, fighter-bomber squadron, and bomber-reconnaissance squadron; in New South Wales—No. 2 Aircraft Depot, No. 22 (Citizen Air Force) Squadron for cooperation with fixed defences, army cooperation squadron, bomber-reconnaissance squadron and fleet cooperation squadron; in Western Australia—No. 25 (Citizen Air Force) Squadron for cooperation with fixed defences. The Salmond Report had been amended in the light of additional demands. The decision to concentrate on three of the seven divisions of the army had led to a consequent decision to form three army cooperation squadrons instead of one as Salmond had proposed. One of these was provided for in the three-year program and two would follow later. Cooperation with fixed defences had not been specially considered by Salmond, but a recent review of the plan for rearming the coast defences entailed air cooperation. Men for four of the five squadrons for this purpose would be from the Citizen Air Force. Two of these squadrons already existed in cadre form, one was provided for in the three-year program and two would be formed later.

For coast reconnaissance Salmond had recommended four units, each of four flying-boats, but these were insufficient. Further, the modern multi-engined landplane, capable of flying with one engine out of action, was considered suitable for seaward reconnaissance as well as for other operations. It was less expensive than the flying-boat and had a higher performance. It was proposed therefore that this aircraft should be substituted, though one flying-boat unit would be maintained in the light of possible requirements in Papua or other areas where land operations were not practicable. This alteration would, without additional cost, permit units of twelve aircraft instead of four flying-boats. Two of these coastal squadrons would be included in the three-year program and three (one with flying-boats) formed later. One fighter-bomber unit was provided in the program and two would be formed later.

With details of the program for the three Services before them, keen air force enthusiasts were quick to compare the respective allocations of

money. The total estimates for each Service for the second year (the best developmental picture the statement provided) gave this comparison: navy £2,961,204; army £2,515,060; air force £1,138,212. Earlier Mr Curtin[3] had expressed in Parliament the view of such critics when he remarked that he regarded the proposed increase in the navy vote as of less service and less economy than that for the air force.

Curtin was expressing Labour's policy when he challenged the Government's emphasis on naval development. But the key to the question whether priority for air force development could be justified lay in another and unanswered question—what the offensive power of the aircraft then in service really was. This could not be answered because there was no adequate evidence from experience in war. And the Government had no intention of reversing a policy that had been maintained by all previous Australian Governments except one—the Scullin Labour Government.

Another issue which deeply concerned those charged with air force development—the old battle over the adoption of the Imperial *Air Force Act*—reappeared about this time. As it had been from the beginning, opposition was by no means solely on party lines in Parliament. The trouble lay in the fact that, whereas the army and the navy were administered in terms of Imperial legislation, the air force was still prescribed for largely by Commonwealth regulations. The Senate Standing Committee on Regulations and Ordinances, in a report issued on 30th October 1935, referred to the lack of an adequate Act. The existing Act consisted of only three sections, applying a portion only of the *Defence Act and Regulations*. The committee held that the problem was not confined to administrative detail, but amounted to substantive legislation which should be the subject of parliamentary enactment, and, regarding the problem as more pressing as the air force increased in importance, saw no reason why a distinction should be made between the air force and the naval and military forces. On 4th December Ministerial approval was given for the drafting, once more, of an Air Defence Bill which would apply the Imperial *Air Force Act*. The draft Bill prepared in 1924 was revised but this "did not meet requirements" and another draft was prepared which, while not departing in principle from the original, resembled more closely the *Naval Defence Act*. But its expediency was still in doubt and it was shelved along with the others.

By March 1936, on the eve of the third year of the three-year defence development plan, about £1,700,000 worth of aircraft had been ordered from Britain for the R.A.A.F., but the R.A.F. expansion program was absorbing the production of the British aircraft industry to such an extent that Parkhill admitted that it was unlikely that any further aircraft would be available from Britain "for a considerable time".

However, the long range answer to the lack of combat aircraft was becoming clearer. In February 1936 the syndicate formed under the

[3] Rt Hon J. Curtin. MHR 1928-31, 1934-45; Prime Minister and Min for Defence 1941-45. Of Cottesloe, WA; b. Creswick, Vic, 8 Jan 1885. Died 5 Jul 1945.

leadership of Essington Lewis had sent a mission of three qualified men[4] to Britain, Europe and the United States, to investigate aircraft production. Five months later the report of this mission was before the Air Board. Convinced that the local production of aircraft for both Service and civil needs was "thoroughly practical" the mission recommended the erection of factories to produce, as an initial program, at least 40 general purpose aircraft,[5] and as a supplementary and simultaneous program, 10 training aircraft. Parkhill, reporting on these recommendations in September, said that it was "absolutely essential" that the Commonwealth should build its own aircraft and that it was expected that the new company would be able to begin production within 12 months. In the same month Mr Casey,[6] the Federal Treasurer, introduced a budget with a heavy emphasis on defence, against a background of deepening international concern caused by the seizure of Ethiopia by Mussolini's forces and by Hitler's rising power. He spoke of the Government's grave responsibilities for national security and observed that the great strides in the development of air communications were an important reminder to Australia that, in spite of its geographical remoteness, it could not ignore happenings elsewhere. Casey then introduced the highest defence vote since the 1914-18 War—£8,809,107. The share of the air force in this vote was much as Parkhill had announced for the program in December 1935. The first-line strength in aircraft would be increased in the first year of the new program to 96, and by the time the plan was completed in 1937 the strength of 114 aircraft contemplated by Salmond would be increased to 194. Thus the leeway lost in the economic depression would be made up. The strength of the regular force would be increased that year to 2,263, an increase of 1,373 since the beginning of the program, while the strength of the Citizen Air Force would be increased by 119. There were then 96 cadets in training.

On 17th October 1936 the Commonwealth Aircraft Corporation was incorporated, with an authorised capital of £1,000,000, the shareholders being the original companies—Broken Hill Proprietary Company Limited, the Broken Hill Associated Smelters Proprietary Limited and General Motors-Holden's Limited—joined by Imperial Chemical Industries of Australia and New Zealand Limited, and the Orient Steam Navigation Company Limited.

While Australia was pressing forward with its vigorous though comparatively modest aircraft production program, the aircraft industry in Britain was taking steps that were to have profound consequences four years later—the eight-gun fighter had been evolved. In March 1936 the pro-

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[4] W Cdr L. J. Wackett, Sqn Ldrs H. C. Harrison and A. W. Murphy.

[5] The type recommended as most suitable for Australian production was an all metal, low-wing monoplane of stressed-skin wing design with variable pitch propeller, hydraulically operated retractable-undercarriage landing gear, and a 600 hp radial engine.

[6] Rt Hon Lord Casey, CH, DSO, MC. (1st AIF: GSO2 Aust Corps.) MHR 1931-40 and 1949-60; Treasurer 1935-39; Min for Supply and Development 1939-40, and 1949-50, for External Affairs 1951-60. Aust Min to USA 1940-42; UK Min in ME 1942-43. Governor of Bengal 1944-46. Of Melbourne; b. Brisbane, 29 Aug 1890.

duction drawings for the Hawker Hurricane were begun. In June the Air Ministry ordered 600 of these aircraft and production began in the same month. (The first production Hurricane flew on 12th October 1937.) It was in 1936, too, that another famous British fighter aircraft, the Spitfire, came into world notice by achieving a speed of 340 miles an hour at 17,500 feet, with a fixed-pitch propeller.

When the Estimates came before Parliament in November Curtin described the Singapore Base as "useless for the defence of Australia" if the British fleet was engaged elsewhere. In the same debate, following references to reports that the Russian Air Force had carried out experimental parachute troop operations, Mr Drakeford[7] remarked that he should "regard as absurd the suggestion that troops could be moved to Western Australia by air in sufficient numbers to defend that State if it were attacked". When Parkhill asked him in what way the Northern Territory could be defended, Drakeford replied that it was conceivable that such territory would have to be relinquished until Australian forces were so organised as to enable them to retake it. From statements made by members on both sides of the House he had been led to believe that out-of-the-way parts of the Australian continent could not be defended in any circumstances; "even Defence experts must acknowledge that", he added.

R.A.A.F. development was placing an increasingly heavy strain on its training resources, and the decision of a year earlier to train 50 pilots for short-service commissions in the R.A.F. in the financial year 1936-37 was becoming an embarrassment. Twenty-five pilots were listed to embark for England in January 1937 and a further 25 in July 1937, but the Air Board sought relief from its commitment of 25 a year in subsequent years. The maximum intake of No. 1 Flying Training School was 96 a year, and while the board recognised the demands created by the expansion of the R.A.F. it fixed 8 each half year as the maximum number of pilots it could now train for that Service.

Overshadowing all other aspects of air defence in 1937 was the influence of the Imperial Conference of that year which caused a sharp rise in Australia's defence expenditure. In August, when the Prime Minister (Mr Lyons) reported on the conference, he gave proof that the air force had gained much ground in the calculation of the relative importance of the three Services. Lyons explained that the Imperial Conference had approved the general lines of R.A.A.F. development and that the stage had been reached at which it had become a question of money, plus the sound and economical development of an extensive ground organisation and of recruiting, training and the manufacture of aircraft. There had been general endorsement in London of the decision to establish an aircraft industry in Australia and this was one of the factors in the Government's defence plan. Air defence was supplementary to Empire sea power as the first line of Australia's defence against invasion. If a British fleet was to

[7] Hon A. S. Drakeford. MLA Vic 1927-32. MHR 1934-57; Min for Air and Civil Aviation 1941-49. Of Moonee Ponds, Vic; b. Fitzroy, Vic, 26 Apr 1878. Died 9 Jun 1957.

be based at Singapore as a safeguard to Australia, Australia must be prepared to cooperate and provide the squadron necessary in her own waters. It was an "unavoidable geographical fact" that the first line of defence for the Commonwealth was naval.[8]

Curtin, always quick to accept the challenge when Singapore was mentioned, quoted a newspaper[9] report of a statement by Winston Churchill in which he declared that Singapore was as far away from Japan as Portsmouth was from New York and could not be regarded in any way as a menace to Japan. Curtin then posed the question: "How can Singapore be so far away from the Yellow Sea as not to be able to hurt it and be a thousand miles farther away from Sydney and yet be able to protect it?" If increased expenditure was to be provided for defence, more should be spent on aerial services than the amount contemplated by the Government. He then returned once more to the old argument based on a comparison of aeroplane and battleship production costs and their relative values in war.[1] He said that he understood that on 31st June 1937, Japan's shore-based bombing and fighting machines totalled 1,500. In addition its invasion power in aircraft from carriers was 300 and Japanese navy-air expansion plans provided for new carriers with a total capacity of 600 aircraft. Australia would need approximately as many aircraft to resist effectively an enemy's attempt to land on her shores. He quoted from a speech by Mr Hughes on 20th October 1936 in which he had said, "Aerial defence is the only defence within our capabilities." For a capital outlay of £15,000,000, Curtin claimed, Australia could have 50 squadrons or 600 aircraft. On current costs 50 squadrons could be maintained and "replaced" for £5,000,000 a year. Such aircraft would be more valuable than the warships that could be provided for the same money.[2]

The back-cloth against which Curtin spoke on all matters of Commonwealth defence was the policy of the Australian Labour Party. This, while it advocated "adequate home defence against possible foreign aggression", sought a prohibition on the raising of forces for service outside the Commonwealth or "participation in or promise of participation in any overseas war except by decision of the people". To achieve an adequate defence

[8] *Commonwealth Debates*, Vol 154, pp. 27-30.

[9] *Sydney Morning Herald*, 1 June 1937.

[1] In 1936 the British Prime Minister, Mr Baldwin, appointed a sub-committee of the Imperial Defence Committee to examine the question of the vulnerability of capital ships to air attack. Members of the sub-committee were: Sir Thomas Inskip (chairman), Viscount Halifax, Mr Malcolm McDonald MP and Mr Walter Runciman MP with Lord Chatfield (First Sea Lord and Chief of the Naval Staff) and Air Chief Marshal Sir Edward Ellington (Chief of the Air Staff) as expert advisers. The sub-committee concluded that the evidence did not justify arguments that air power had doomed the battleship. On the question of relative costs the Admiralty and the Air Ministry had collaborated in an investigation and had given the agreed figure of 43 twin-engined bombers as the nearest approximation possible to the equivalent in cost of one capital ship, taking into account overhead, maintenance, replacement, and similar charges. "The fact is," the report stated, "that the relative costs of battleships and aeroplanes have not, in themselves, any bearing on the matter. If capital ships are essential to our security, we must have them. . . . The advocates of the extreme air view would wish this country to build up no capital ships (other Powers continuing to build them). If their theories turn out well-founded we have wasted money; if ill-founded, we would, in putting them to the test, have lost the Empire."—*Command Paper No. 5301*, 1936.

[2] *Commonwealth Debates*, Vol 154, pp. 106-8.

plan commensurate with Australia's ability to maintain it, the party had adopted an eight-point program the first point in which was "aerial defence and the further development of commercial aviation capable of conversion for defence purposes", and the second, "establishment of airports and depots at strategical points on the coast and inland". The naval and land forces (which, with the aerial forces, were to be maintained "at an efficient standard") received their first mention in Point 6.

The Commonwealth Aircraft Corporation had now decided that the aircraft with specifications most closely resembling those recently recommended by the oversea mission was the NA-33, made by the North American Aircraft Corporation, California. This had a Pratt and Whitney single-row Wasp radial engine. The chief reason for the corporation's preference for this aircraft was that both the airframe and the engine were comparatively simple and presented no great construction problem —and therefore were suitable for the industry to cut its teeth on. Acceptance of an American design drew one or two mild protests in Parliament about keeping aircraft construction "within the Empire", but the project was approved, and planning began for production of the NA-33 which, with modifications specified by the R.A.A.F., was to become known as the Wirraway.[3]

Another current development was the growth of the Meteorological Branch of the Department of the Interior under what was known as the "aviation plan". Permanent positions in the branch were increased from 92 to 151. Special training in forecasting and research was provided for men who were to be posted to aerodromes throughout the Commonwealth and provision was made for the complete re-equipment of the radio station at Laverton which Parkhill admitted was obsolescent.

As 1937 was closing Mr Thorby,[4] who had succeeded Parkhill as Minister for Defence, found his responsibilities increasingly heavy. In December the Japanese sank the American gunboat *Panay* by air bombing in the Yangtze River. Awareness of international tension was becoming more and more noticeable—though it was still considered "diplomatic" to refrain from naming Japan directly; as when Sir Henry Gullett[5] declared, "I shall not name a particular country", and went on to refer to Singapore and Hong Kong as two great naval bases lying "across the track of any aggression which can menace this country". Such aggression, he said, was not unlikely, but these bases had a very considerable and increasing air force. He advocated naval and air force cooperation with the British forces in the Far East and pictured the R.A.A.F. as "an air

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[3] An aboriginal word meaning "challenge".

[4] Hon H. V. C. Thorby. MLA NSW 1922-30. MHR 1931-40. Min War Service Homes 1934-36, Defence 1937-38, Works and Civil Aviation 1938-39; PMG and Min for Health 1940. Of Wongarbon, NSW; b. Sydney, 2 Oct 1888.

[5] Hon Sir Henry Gullett, KCMG. (1st AIF: gnr AFA and official war correspondent, Palestine.) MHR 1925-40; Min for Trade and Customs 1928-29, 1932-33, for Trade Treaties 1934-37, for External Affrs 1939-40, for Information 1939-40. Of Sydney; b. Harston, Vic, 26 Mar 1878. Killed in aircraft accident 13 Aug 1940.

force which could move freely over the intervening islands in the event of danger".[6]

As 1938 opened the pressure on the defence program became still greater. In March Mr Lyons announced a revised three-years plan with an expenditure of £43,000,000—more than double the sum spent in the previous three years. Of this the navy would receive £15,000,000, the air force £12,500,000 and the army £11,500,000. For the first time the air force was given priority over another Service in the direct allocation of money. The new program was related to what Lyons described as a "wider pattern of Empire defence, with Empire sea power and the Singapore Base as its fundamental basis". For the air force the plan would provide (in three years) 9 additional squadrons, another flying training school, an equipment depot, 2 armament training camps, 2 group headquarters, 4 station headquarters and the extension of existing establishments. Thus the number of squadrons would be raised to 17 with a first-line strength of 198 aircraft. The strength of the regular air force in February was 199 officers and 2,020 airmen, which was 61 officers and 230 airmen short of the full establishment. To complete the 17-squadron program the strength would need to be increased by 240 officers and 2,250 airmen to a total of 500 officers and 4,500 airmen. In this total approximately 490 would be pilots.

The Commonwealth Aircraft Corporation, which was given an accelerated program with a substantial increase in the number of aircraft on order,[7] began to lay in stocks of essential materials. Darwin was now receiving more definite recognition as a site for an air base and in May the Air Board reviewed a works program for the site to cost £282,000.

Meanwhile the Air Board was once more wrestling with the old problem of trying to apply the Imperial *Air Force Act*. All other air forces of the British Commonwealth used the one legal code which was laid down by this Act on the basis of experience gained in administering the R.A.F. Most recently (in 1937) the New Zealand Parliament had adopted it for the R.N.Z.A.F. and had applied, in addition, Britain's *Rules of Procedure, King's Regulations* and *Air Council Instructions*. This, it was claimed, greatly simplified all administrative problems when the air force came into formal contact with the navy and the army, which used similar Imperial manuals, and with air forces of the Empire other than the R.A.A.F. But there was no immediate solution and at this stage the attention of the Air Board was diverted into a much deeper and wider channel which concerned the whole fabric of the force.

The prospect of war was becoming graver. Germany had annexed Austria, making the *Anschluss* a grim fact, and her quarrel with Czecho-

[6] *Commonwealth Debates*, Vol 155, p. 90.

[7] At this time the RAAF was flying Hawker Demon fighter-bombers (first deliveries 1935), Avro Anson bombers (first deliveries early 1937), and Seagull amphibians (first deliveries 1935-36). Training types were Westland Wapitis, Bristol Bulldogs and Supermarine Southamptons (first received as service types about 1928; in use as trainers for from two to three years), De Havilland Moths (first received 1928; individual aircraft replaced periodically), and Avro Trainers (first received 1935-36).

slovakia was reaching boiling-point. In the face of such news the Australian Government had decided that the air force, in common with the army and the navy, should be developed into a strong independent fighting Service, fitted for war. It was apparent that the Salmond plan, revised though it had been in 1936, was now an inadequate basis for the future. For some time service flying casualties had been arousing hot criticism in Press and Parliament, a situation which led to mis-statements that were unfair both to the public and to the Service. The immediate answer, the Cabinet decided, lay in obtaining an independent critical report from the best expert available. After an exchange of opinion with the Air Ministry, London, the Government invited Marshal of the Royal Air Force Sir Edward Ellington to make such a report. Ellington, having relinquished the post of Chief of Staff of the Royal Air Force in August 1937 to Air Chief Marshal Sir Cyril Newall,[8] was now Inspector General of the R.A.F. The first announcement the Air Board received of the invitation to Ellington appeared in the Press, a fact which, very naturally, put the board sharply on the defensive.

Soon after he reached Australia, Press interviewers quoted Ellington as making two sweeping comments on Australian defence. One was that Australia's first line of defence lay in England—Japan could never attack Australia without overcoming British power; an opinion to which he was quoted as adding that local defence, though necessary, was of secondary importance. The second reported comment was that Australia was safe from attack by air except by seaborne aircraft which would not be effective "under present conditions".[9]

It was mid-June when Ellington began his investigation and one month later, on the eve of his departure for New Zealand, he submitted his report to Lyons. It was a document written dispassionately, clearly and formally. The introductory passage suggested that the aim of the R.A.A.F. should be defined as "the defeat, in cooperation with the navy and army, of any power which is threatening the independence of the country". He found some aspects of the proposed expansion, notably the question of reserves, as taking too narrow a view of the requirements of the R.A.A.F. in war. He advocated the exchange of senior officers between the R.A.A.F. and the R.A.F. All service squadrons were below strength both in officers and other ranks, and deficient in flight commanders and non-commissioned officers. Cadets and other recruits were of the right type and the maintenance of aircraft was efficient.

But for all directly concerned the crucial part of the report was that relating to service flying accidents. "The rate of the R.A.A.F. is definitely worse than that in the United Kingdom," Ellington wrote, but he added that in a small air force fluctuations must be expected. Records for the previous three years had been examined and these showed that of 12

[8] Marshal of RAF Lord Newall, GCB, OM, GCMG, CBE, AM. Chief of Air Staff 1937-40. Governor-General of New Zealand 1941-46. B. 15 Feb 1886.

[9] *Argus* (Melbourne), 16th and 30th June 1938.

accidents, three appeared due to disobedience or bad flying discipline and possibly a fourth was due to the same cause. This was a high proportion and pointed to a need for the strict enforcement of regulations. Examination of reports on a series of Hawker Demon accidents showed no evidence either of faulty maintenance or of defects inherent in the design of the aircraft.

Next in importance to the need for improvement in flying discipline, Ellington placed improvement in training after the flying training school course had been completed. The initial training of pilots at Point Cook and of other ranks at Laverton was thorough, but there was room for improvement after the training had been completed at Point Cook, notably in the service squadrons and especially in armament training. Flying training should be extended to include instruction comparable with that of advanced training squadrons in the R.A.F. and an air navigation course of at least 10 weeks should be provided. Flying clubs or civil transport companies should undertake the training of pilots both for the Reserve and as a preliminary to the flying training school course for those intending to enter the regular service. Further, these clubs or companies should provide annual training for Reserve pilots, though instructors might be difficult to obtain at that time. It was essential that the Air Board should have power to supervise such training and the necessary staff should be added to R.A.A.F. Headquarters for that purpose. It should be Government policy in normal times that all pilots of subsidised airline companies should first have passed through the R.A.A.F. Civil and R.A.A.F. pilots might be exchanged for brief periods—more cooperation between civil aviation and the R.A.A.F. was desirable.[1]

At the Commonwealth Aircraft Corporation's factory at Fishermen's Bend, Melbourne, Ellington inspected the Wirraway. "I understand," he wrote in his report, "that it is intended to use it in replacement of the Demon as a fighter-bomber. I consider that the Wirraway should be regarded as a temporary expedient . . . it can only be regarded as an advanced training aircraft." He suggested that the choice of a new type should be delayed until a suitable aircraft had been tested in Britain.

In Ellington's opinion the existing meteorological stations were inadequate both for the air force and for civil aviation. High priority, he said, should be given to the proposed establishment of 14 additional stations at places including Rabaul, Salamaua, and Norfolk and Lord Howe Islands.

At the end of June, while Ellington was still engaged in his investigations and before he had made known his poor opinion of the Wirraway, Mr Thorby announced that 40 of these aircraft had been ordered on

[1] The most important civil aviation development in 1938 occurred on 1st July when the Commonwealth Parliament passed the Empire Air Service (England to Australia) Bill to ratify an agreement between the British and Australian Governments and Qantas Empire Airways Ltd; the Australian Government was to pay Qantas an annual subsidy (not exceeding £50,000) for the carriage of mails. The first through westbound flying-boat service left Sydney on 5 July and the first eastbound service reached Sydney on 6 July. By August 1938 three services a week were operating.

definite contract at a "very satisfactory" price in relation to that for imported machines of similar type. Between 60 and 70 additional aircraft would be ordered later. Arrangements had been made to provide all the types of aircraft required and, after the first delivery, these would be 100 per cent Australian.

In the same month the Air Board was authorised to retain the eight Australian-trained pilots who would be ready for R.A.F. short-service commissions by January 1939 on the ground that the entire output of No. 1 Flying Training School was needed for Australian expansion. But authority was also given to increase the number of Australians to be sent to Britain for training there for R.A.F. short-service commissions from the promised 25 to 40 a year.

The threat implied by the Munich crisis quickened defence preparations still further. On 26th August the Council of Defence[2] met and after a survey of the whole situation ordered all regular forces to their war stations. The strategical redistribution of the R.A.A.F. was planned; provision was made for taking over civil aircraft for war purposes, and workshop production was accelerated to bring the serviceability of all aircraft to its maximum.

On 31st August Lyons released the Ellington report to the Press. The immediate outcome of this was that Lyons was quoted as being "satisfied" and as saying that the Government had adopted the report which had confirmed the general lines of the Government's air defence policy; the Air Board was hot with indignation, and the Press, for the most part, highly critical of the Air Board and of the Chief of the Air Staff in particular. Among the more restrained newspaper comments was an editorial in *The Sydney Morning Herald* of 1st September which said of Ellington's proposal that senior R.A.A.F. and R.A.F. officers should be exchanged: "if this opportunity were accepted in its full spirit there would be an opportunity both for reconstruction of the Air Board and the advantage to the whole Service of guidance for a term by a senior British air officer with valuable up-to-date experience—an advantage which the Australian Fleet and Army already appreciate."

Partial mobilisation of the air force in Britain in September was a grim pointer to what might lie ahead. In the Australian Parliament there were questions about the post of Chief of the Air Staff. Mr Curtin questioned the Government's expenditure on aircraft. The Ellington report, he said, comprised at least a severe questioning of the aircraft the R.A.A.F. now had. The report, he added, carried, as it were, screaming across every page, "I mean much more than I say." Parliament should have better evidence that the colossal burden which defence was imposing was not greater than it should be.

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[2] The Council of Defence had been constituted by Statutory Rule No. 37 of 1935 for the higher direction of defence policy. It was superseded on the outbreak of war by the War Cabinet and Chiefs of Staff Committee.



(*R.A.A.F.*)

The Air Board in 1928. *Left to right*—Rear row: Mr P. E. Coleman (Secretary) and Mr A. C. Joyce (Finance Member). Front row: Gp Capt S. J. Goble (Director of Personnel and Training), Air Cmdre R. Williams (Director of Intelligence and Organisation) and W Cdr R. A. McBain (Director of Equipment).



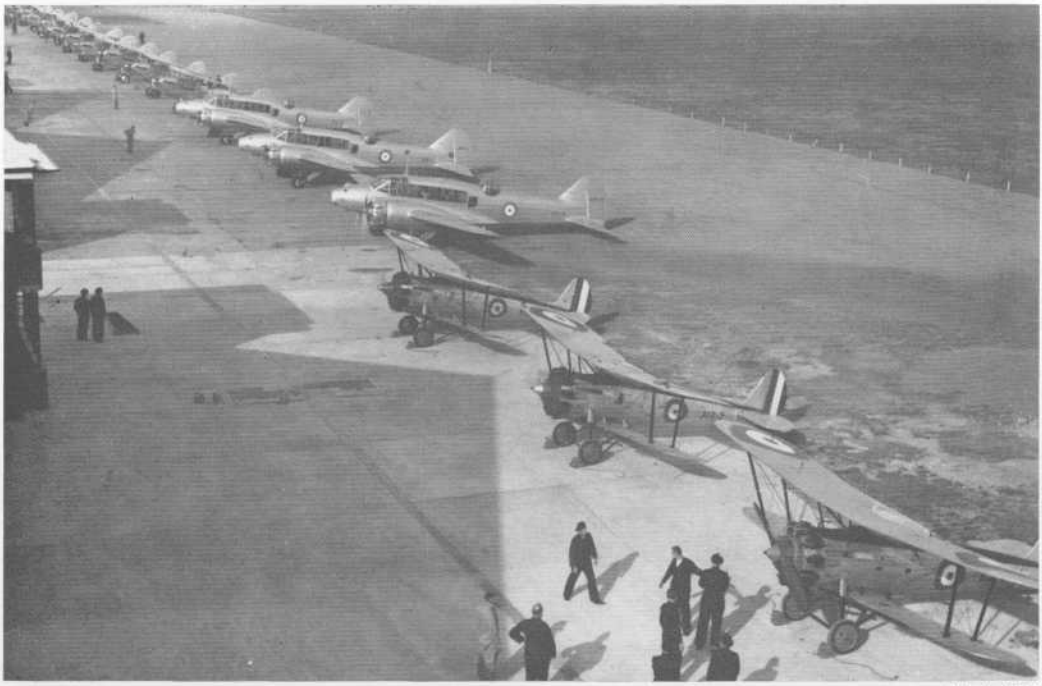
(*R A A.F.*)

W Cdr S. J. Goble and F-Lt I. E. McIntyre (RNAS) after completing the first flight round the Australian continent on 4th July 1924. The flight in a Fairey seaplane covered 7,186 nautical miles and was accomplished in 20 days of actual flying. At the time it was an outstanding feat in aviation.



(*R.A.A.F.*)

A formation of Southampton flying-boats of No. 101 Flight, 31st January 1930. At this time the aircraft of No. 101 Flight were operating with H.M.A.S. *Albatross*.



(*R.A.A.F.*)

From background to foreground, Hawker Demon, Avro Anson and Bristol Bulldog aircraft of No. 1 Flying Training School at Laverton, Victoria, on 12th May 1937.

The signing of the Munich Agreement on 29th September had eased the tension generally. In November Mr Street[3] succeeded Mr Thorby as Minister for Defence and Thorby became the first Minister for Civil Aviation. As a step towards overcoming the grave lack of aircraft the Government had placed an order for 50 Lockheed Hudsons for early delivery from the United States, but a proposal (originating in the New South Wales Parliament) that the Lockheed Aircraft Corporation should be invited to establish a factory in Australia was rejected. The Commonwealth Aircraft Corporation was then employing between 600 and 700 men.

Late in November the debate on the 1938-39 Budget in the House of Representatives produced a speech on defence by Mr Fairbairn,[4] who pictured the possible fall of Singapore and a situation in which Britain would not be able to come to Australia's aid for some considerable time. He then declared that the part of the R.A.A.F. in war would not be as great as many imagined. Some people thought that because R.A.F. bombers had recently flown from Egypt to Darwin in little more than a day, Australia could be bombed from a base in Japan. That idea was nonsense, "even Brisbane could not be effectively bombed by an enemy operating from a base in New Guinea". As an independent force the R.A.A.F's main duty would be to intercept such aircraft as could be dispatched from enemy raiding cruisers which could only be small in number and striking power. "It should be quite easy for us to provide adequate air defences to meet that contingency," he added.

This speech by Fairbairn was notable because, made from the Government benches, it ended with very sharp criticism of the Government which opened up the whole question of the Ellington report as it reflected on Williams as Chief of the Air Staff. He (Fairbairn) felt that the greatest benefit from such a visit would come not from any report Ellington might make, but in the fact that members of the force would have opportunities to discuss with him at length their particular problems. But he had reason to suspect that Ellington had no conferences with the R.A.A.F. and had never discussed its problems with any senior member of the force. Apparently, too, he had been given no opportunity to be helpful in any way except by reporting to the Prime Minister and, Fairbairn declared, "one realises how well fitted the Prime Minister and the ex-Minister for Defence are to take action on a report from a great air expert". Almost as soon as Ellington had left, a report was handed out to the public and, on the strength of it, the Press had come out with very severe criticisms of the Chief of the Air Staff and the Air Board. What seemed monstrously unfair was that the report was made public without any opportunity being given to the Air Board to defend itself publicly. "In my opinion," Fair-

[3] Brig Hon G. A. Street, MC. (1st AIF: 1 Bn 1914-16; BM 15 Bde 1917-18.) MHR 1934-40; Min for Defence 1938-39, for Army 1939-40. B. Sydney, 21 Jan 1894. Killed in aircraft accident 13 Aug 1940.

[4] Hon J. V. Fairbairn. (1914-18: RFC.) MLA Vic 1932-33; MHR 1933-40. Min for Air and Civil Aviation 1939-40. Of Derrinallum, Vic; b. Wadhurst, Surrey, Eng, 28 Jul 1897. Killed in aircraft accident 13 Aug 1940.

bairn declared, "this is one of the most staggering of the many signs of ineptitude in regard to national leadership at the present time. Moreover, I have reason to suspect that some inner report must have been given to the Press over and above that given for publication because I have read Sir Edward Ellington's report over and over again and I cannot see in it anything on which to base the criticism made by several newspapers of the Chief of our Air Staff."[5]

In December Street announced that expenditure on the air force was to be increased from £12,512,000 to £16,444,000. The main new items of expenditure were: the local manufacture of aircraft; reserves of equipment, tools and fuel; reserve training; formation of a Citizen Force cadre squadron at Townsville; and the establishment at Port Moresby of a base for mobile naval and air forces. The R.A.A.F's first-line strength would be raised from 17 squadrons with 198 aircraft, to 18 with 212. The principle underlying the proposed strategic distribution of the air force in peace was that forces sufficient to undertake air defence, reconnaissance and striking operations, should be maintained in each vital area of the Commonwealth. In addition a reserve was to be maintained in a central area from which reinforcements could be dispatched along organised air routes to other areas or threatened points. The Prime Minister had made personal representations to the British Prime Minister for the earliest possible delivery of twin-engined, general reconnaissance aircraft and as a result the British Government was lending Australia, on a charter basis, a number of Avro Anson aircraft as an interim measure. These would be in addition to the 50 Lockheed Hudson aircraft the Government had ordered earlier from the United States.

Street said that the expanded program included the full equipment of the first-line strength of 212 aircraft with the necessary reserves. Orders for the locally-made Wirraway had also been increased. Airfields would be constructed at coastal points such as Nowra and Moruya Heads in New South Wales, Bairnsdale and Mallacoota in Victoria and either Busselton or Harvey in Western Australia. Flying-boats would be stationed at the new Port Moresby base.[6]

By mid-January 1939 Fairbairn's attack on the Lyons Government over the Ellington report had produced two answers. The first was a Press statement which Lyons issued on 16th January and the second was the printing of the Ellington report with comments by the Air Board and the Civil Aviation Board and with what a prefatory paragraph described as "the decisions and observations of the Commonwealth Government". The Press statement announced that "the conflict of opinion between Sir Edward Ellington and the Air Board" had required a most exhaustive examination of the matters dealt with. In view of the national concern of the Australian people in any criticism of the efficiency of the Australian defence forces, it was important that there should be a plain and

[5] *Commonwealth Debates,* Vol 158, pp. 1993-6.
[6] *Commonwealth Debates,* Vol 158, pp. 2670-2.

straightforward summary expressing the kernel of the Government's conclusions; one which could be readily understood by all. It then set out seven points made by Ellington in praise of the R.A.A.F. and continued:

Sir Edward Ellington then proceeded to criticisms in regard to flying accidents, discipline and training. While appreciating that there have been difficulties inherent in expansion and delivery of equipment, the Government considers, from the information before it, that the Air Board cannot be absolved from blame for these conditions and that the main responsibility rests on the Chief of the Air Staff. The Government considers that the air force is organically sound, but that the criticism points to more short-comings in the directive faculty. The Government, however, feels that considerable credit is due to Air Vice-Marshal Williams for his past work in building up the R.A.A.F. and that a defect of the air force organisation has been the absence of a senior command to which the Chief of the Air Staff could rotate, as in the case of the Military Board. The varied experience which is essential for occupants of the post of Chief of the Air Staff must therefore be sought overseas. By arrangement with the Air Ministry Air Vice-Marshal Williams is being sent abroad for two years, during which period he will be attached in the first instance to the Chief of the Air Staff, R.A.F. Later, the Air Ministry proposes that he should assume the appointment of officer in charge of administration of the Coastal Command and subsequently executive command of an operational group. Air Commodore Goble, the present Air Member for Personnel, will become Acting Chief of the Air Staff with the temporary rank of Air Vice-Marshal. Air Commodore J. C. Russell[7] of the R.A.F. has been selected to proceed to Australia on exchange with Air Vice-Marshal Williams for duty as Air Member for Personnel in the R.A.A.F. . . . These changes will also give effect to the exchange of senior officers as recommended by Sir Edward Ellington. Air Commodore Goble recently returned from two years' duty in Britain.[8]

In the departmental observations of each phase of the Ellington report there was a warmth of expression that was in marked contrast to Ellington's own dispassionate phrasing. To his first suggestion, that in defining the aim of the force too narrow a view of the war requirements of the Service had been taken, the Air Board replied that the aim itself was decided by Government policy and quoted from the agenda of the Council of Defence,[9] which defined this aim as "acting in close cooperation with the navy and the army to defend Australia and its territories against raids on territory or on trade". To change this would call for a complete review on the basis of a much wider field of operations and wider range of activities as well as reconsideration of reserves. For the Government it was insisted that a limited role for the air force had not been envisaged and, from a statement by Lyons on 24th August 1937, were quoted the words "and as a striking force in whatever role it may be required to perform". Clashes between the Air Board and the Government were revealed at intervals through the comments on the report suggesting that, with the passing of time, the report had become a vehicle more for the

[7] Air Cmdre J. C. Russell, DSO, RAF. (1914-18: 5 and 54 Sqns RFC; comd 32 Sqn RAF 1917-18, 90 Wing 1918, 32 Wing 1918-19.) Air Member for Personnel RAAF 1939-40; comd 1 (Indian) Gp 1940-42. Regular air force offr; b. Balmaghie, Kirkcudbrightshire, Scotland, 6 Mar 1895. Died 15 Aug 1956.

[8] This Press statement was reproduced as an addendum to the printed copy of the Ellington report.

[9] Agendum No. 2, 1938.

conflict of opinion between the Government and the board than between the board and Ellington. Concerning flying accidents the Government declared that "since Sir Edward Ellington's visit there have been accidents, particularly in the service squadrons, which had indicated the persistence of underlying causes".

The Government's observations on this point also disclosed that Parliamentary and Press criticism had had much to do with the decision to invite Ellington to make the report. "As the purpose of Sir Edward Ellington's visit was to report on the R.A.A.F., particularly in view of the alarm expressed in Parliament and Press on the accident rate," the comment added, "great weight must be attached to his conclusions." With some warmth the board contested Ellington's statement that the rate of accidents in the R.A.A.F. was definitely worse than in the R.A.F. Such comparison was unfair it claimed. General experience, supported by statistics, showed that in normal conditions, and even allowing for the fluctuations to which Ellington had referred, accidents must be expected to increase in number with an increase in flying hours—but not in proportion to the hours flown. The R.A.F's flying hours were, proportionately, something like 30 times those of the R.A.A.F., much of it done in multi-engined aircraft of long endurance commanded by experienced pilots with second pilots or automatic pilots to assist them. In public addresses in Australia Ellington had said that in the R.A.F. most accidents to pilots occurred in their first and second year after graduation. Eighty-three per cent of R.A.A.F. pilots were in this category. The board protested "most strongly" against Ellington's method of relating discipline to accident figures and thus comparing the R.A.A.F. with the R.A.F. R.A.A.F. discipline was equal to that of the R.A.F.

The Air Board warmly defended the Wirraway as the best aircraft available in its class. The board could not believe that Ellington intended that the Demon should be used in operations while the Wirraway was regarded as a trainer only. His words "temporary expedient" were misleading; every type could be so regarded until a better aircraft was available—and a better aircraft of its class than the Wirraway was not even in sight. In this way, with considerable bitterness, the details of the Ellington report were argued.

As though in defiance of Ellington's criticism the first Wirraway became airborne for test flying on 27th March 1939, its performance[1] earning the praise of the Minister for Defence. In March also an air mission, sent to Australia at the suggestion of the British Government, recommended that Beaufort bombers should be built in Australia for both the R.A.F. and R.A.A.F. It was proposed that space available in State Government railway workshops should be used for the manufacture of certain components and that others be made by sub-contractors in private industry.

[1] Performance: Top speed at critical altitude (8,600 ft) 220 mph; maximum rate of climb 1,950 feet a minute. Original armament: two fixed .303-in machine-guns firing through the propeller; one rear gun mounted on hydraulic hoist; normal bomb-load 500 lb.

The assembly of the aircraft complete with engines and the manufacture of accessories and fittings should be undertaken in two main workshops, one in Sydney and the other in Melbourne. These recommendations were approved by both the British and Australian Governments.

In June the Council of Defence called for reviews by the Chiefs of Staff with "medium" and "invasion" scales of attack as their basis; this to supplement the earlier policy of basing Australia's defence on the probability of "minor"-scale attacks on territory or trade. The Chief of the Air Staff recommended expansion of the air force to meet "medium"-scale attacks, a plan which anticipated sustained attacks on shipping by enemy vessels and heavy raids on territory by combined operations. A program for a force of 32 squadrons with a first-line strength of 360 aircraft with the necessary ancillary units was recommended. This force was to be composed of 14 general reconnaissance (bomber or torpedo-bomber), 3 general reconnaissance (flying-boat), 9 general purpose, 2 fighter, 1 fleet cooperation and 3 army cooperation squadrons. But the Government decided that the "minor"-scale basis should be retained and the proposal, to become known subsequently as the "Z Scheme", was deferred.

Acceptance of the Beaufort as the most suitable type of aircraft for general reconnaissance and as a bomber had a political as well as a Service aspect. Civil aircraft were now operating at speeds approaching 240 miles an hour and the Government was being subjected to criticism in which this fact was being used for comparison with the performance of Service aircraft. On this issue as well as for specifically Service reasons, the Beaufort with a maximum speed of 270 miles an hour appeared to be the best answer.[2]

With the accession of Mr Menzies[3] to the Prime Ministership in April, soon after the death of Mr Lyons, Mr Fairbairn was appointed Minister for Civil Aviation, Minister assisting the Minister for Defence and Vice-President of the Executive Council.

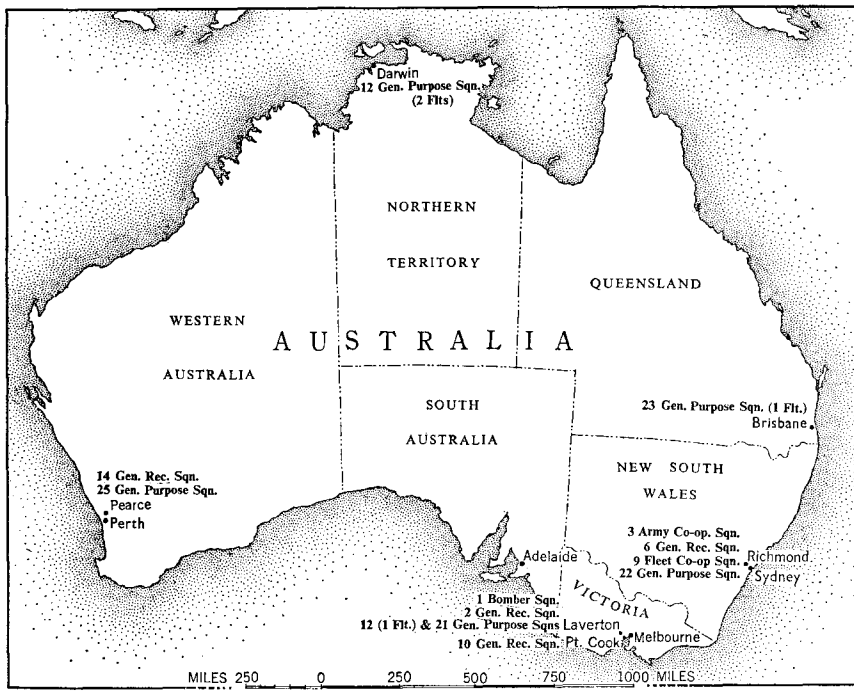
On 10th July the R.A.A.F. took delivery of its first Wirraway and in the same month Street announced that the Service, with a regular force strength of 3,104 and a Citizen Force of 552, was inviting applications for cadetships for flying training courses of three terms each of 15 weeks, the intake for which was 50 cadets a term. Expenditure on a new flying

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[2] At this stage the various types of aircraft selected for the different air force roles, the periods for which they were to be regarded as standard and the time at which preparations for production (or purchase) of new types to replace them were to begin (given in parentheses) were: general reconnaissance—Beaufort with Taurus engine, for seven years (at the end of four or five years); general purpose and intermediate training—Wirraway with single-row Wasp engine, for five years (at the end of three years); fighters—an approved RAF twin-engined aircraft (the Beaufighter) with 1300 hp engines, to be imported and standard for seven years (at the end of five years); flying-boats—Sunderlands, to be imported, with Pegasus 22 engines, for seven years (at the end of five years); fleet cooperation—Seagull V, to be imported, with Pegasus 2M2 engines for three years (at the end of two years); primary trainer—CAC low-wing monoplane if prototype tests satisfactory with Gipsy II engines, for eight years (at the end of six years).

[3] Rt Hon R. G. Menzies, CH. MLC Vic 1928-29; MLA Vic 1929-34; MHR since 1934. Prime Minister 1939-41 and since 1949; Min for Defence Co-ordination 1939-41. Of Melbourne and Ballarat, Vic; b. Jeparit, Vic, 20 Dec 1894.

training school at Forest Hill, near Wagga, New South Wales, received the Minister's approval in August.



R.A.A.F. on the eve of war

On 25th August, after a meeting of the Defence Committee, the Prime Minister formally announced the existence of a state of emergency. Next day the Administrator of the Northern Territory was informed that seven Ansons of No. 12 Squadron would leave for Darwin as soon as the weather permitted and that these would be followed by a flight of four Wirraways about 1st September, or, if the situation demanded, four Demons would be sent earlier in place of the Wirraways.

The disposition of the R.A.A.F. squadrons on 28th August was:

Laverton, Victoria
No. 1 (Bomber) Squadron
No. 2 (General Reconnaissance) Squadron
No. 21 (General Purpose) Squadron
One flight of No. 12 (General Purpose) Squadron
Richmond, New South Wales
No. 3 (Army Cooperation) Squadron
No. 6 (General Reconnaissance) Squadron
No. 9 (Fleet Cooperation) Squadron, less three aircraft in cruisers
No. 22 (General Purpose) Squadron

Point Cook, Victoria
No. 10 (General Reconnaissance) Squadron, with temporary aircraft pending the arrival of Sunderland flying-boats ordered from Britain
Pearce, Western Australia
No. 14 (General Reconnaissance) Squadron
No. 25 (General Purpose) Squadron
Darwin, Northern Territory
No. 12 Squadron (two flights only)
Brisbane, Queensland
No. 23 (General Purpose) Squadron, one flight only

At this date the R.A.A.F. possessed 82 Ansons, 54 Demons, 7 Wirraways and 21 Seagulls. There were also 82 trainers.

At 5.30 a.m. on 1st September Germany invaded Poland and the next day the "precautionary stage" for all Commonwealth Defence Forces was adopted, the whole of the active Permanent and Citizen Forces and portion of the Reserve being called up. On 3rd September Britain declared war on Germany. Australia and New Zealand immediately followed Britain's lead and the Commonwealth's "full war stage" went into operation. For the air force this meant complete mobilisation with all squadrons at war stations and on short call for combat operations.

CHAPTER 3

DEMAND VERSUS CAPACITY

TO meet the immediate demands of war the Permanent Air Force possessed 310 officers, 3,179 airmen, and 246 aircraft (only 164 of them operational machines); there were 36 general duties officers in the Citizen Air Force and 158, many of them former regulars, in the Reserve. The current program, which was to have been completed by June 1941, was for 19 squadrons with a strength of 212 first-line aircraft and a reserve of 50 per cent. Of these squadrons 12 had been formed but two existed in nucleus only. Part of No. 10 Squadron had been sent to England to take delivery of Sunderland flying-boats with which the squadron was to be equipped.

In Parliament on 6th September, Mr Curtin, as Leader of the Opposition, assured the House that the Labour party's platform insisted that "nothing should be left undone to ensure the greatest effectiveness among our people to hold this country for the citizens of the Commonwealth". There ought not to be, but there might be, he added, two major points of difference between the Government and the Opposition—conscription (to which Labour was most strongly opposed) and the dispatch overseas of expeditionary forces.

Despite Curtin's pointers to possible political differences, the Government, on 15th September—the day on which the formation of the War Cabinet was announced—decided to enlist a volunteer army force of 20,000 men for service at home or overseas. Five days later the Prime Minister, Mr Menzies, announced the Government's further decision to offer the British Government a force of six squadrons—four of bombers and two of fighters, with ancillary units.[1] The Prime Minister's announcement, which was received in Parliament with a burst of cheering,[2] was followed by an explanatory speech in which Mr Menzies said that the offer conformed completely with the Government's policy: first, to provide for adequate defence of the Commonwealth and, second, to give to Britain whatever help was possible without detracting from Australia's capacity to discharge the first responsibility. The Government had learned, he said, that, particularly in the first years of war when the production of military aircraft in Great Britain and France would be expanding rapidly and when it might be anticipated that air warfare would be of predominating importance, the greatest possible assistance that could be given to Britain would be in providing trained aircrews. A careful survey of Australia's capacity to train such crews had shown it to be far greater

[1] HQ Field Force—1 Fighter Wing HQ with Nos. 7 and 15 Sqns; 2 Bomber Wing HQ with Nos. 1 and 8 Sqns; 3 Bomber Wing HQ with Nos. 16 and 17 Sqns (nominal strength 550 officers and airmen); 1 Air Stores Park, 1 Medical Receiving Station, HQ Base Area, Base Depot. Strength, with ground staff (if provided) 2,975; reinforcement pool 225—total 3,200 officers and airmen.

[2] *Argus* (Melbourne), 21 Sep 1939.

than was required to man all the military aircraft that, in the most favourable circumstances and within measurable time, would become available in Australia through local manufacture and purchase overseas. After providing fully for present and contingent needs it would be possible to train enough men for the air expeditionary force it was proposed to offer Britain. The dispatch of such a force, he said, while it would be a relatively small subtraction from total manpower, would give a very real measure of help to Britain in an arm in which her needs were greatest; the dispatch of the force would not reduce Australia's defence by a single aircraft. Under the terms of the offer the six squadrons would operate as an Australian force. The question of sending ground maintenance staff had been deferred until the effect such action might have on Australia's reserves of skilled mechanics could be measured. Unless it would prejudice Australia's production capacity such staff would be sent. The whole proposal would, of course, be subject to any unexpected difficulties or change in Australia's strategic position. As Australia's capacity to do so increased, the Government would give consideration to the possibility of still further reinforcing the great air effort in which the British and French peoples would undoubtedly have to engage before long.[3]

On 14th September the Minister for Defence, Mr Street, disclosed a plan for training a "large number" of civil pilots as flying instructors. Applications, he said, would be invited from pilots aged between 32 and 45 years who held private or commercial licences and had at least 300 flying hours recorded in their log-books.

But keen interest in the prospect of service in the air force was not confined to those who wanted to fly. This was illustrated on the day on which Mr Menzies made his speech in Parliament by a scene at the Melbourne recruiting depot, which was crowded by about 2,000 men anxious to enlist as fitters, cooks, mess stewards and labourers. According to a newspaper report[4] 1,000 applications were dealt with and the remainder of the men were sent away after being told to apply in writing. The report added that, at the time, the air force was calling for between only 157 and 170 men.

On 30th September Mr Fairbairn broadcast an earnest appeal for flying instructors; the large numbers hoped for by Mr Street were not coming forward. He declared that "victory in this war will depend upon mastery in the air", and that "the training of an overwhelming strength in pilots and aircrews is one of the most essential tasks to be undertaken by the democracies". He announced the widening of the age-range for flying instructors to from 25 to 45 years and a reduction of the flying hours required to 200. Successful applicants would be enlisted, he said, as pilot officers and, after a training course of from six to eight weeks, would begin duties as flying instructors with the rank of flying officer. Mr Fairbairn examined the reasons for the disinclination of civil airmen

[3] *Commonwealth Debates*, Vol 161, pp. 840-1.

[4] *Argus* (Melbourne), 21 Sep 1939.

to become instructors. An eager preference for combat service and an over-modest assessment of their qualifications were predominant. He appealed to trained airmen to regard the work of the service flying instructor as even more valuable than combat duties, particularly at that stage of the war.[5]

Earlier, in a national broadcast, the Prime Minister had again emphasised his conviction that priority must be given to air force planning. He declared that the British Government was not asking Australia to send a large military force abroad. "I believe," he said, "and my belief is pretty well founded, that the cooperation of the Dominions with Great Britain in the provision of trained airmen, and in the case of some Dominions, in the provision of aircraft, will be of growing and vital importance. It may be that in our hours of greatest difficulty—and we are going to have some—the Mother Country will be asking more insistently for help in the air than for help on the land or the sea."[6]

In the meantime on 22nd September the Defence Committee had endorsed the recommendation of the Air Board that the R.A.A.F. should be increased by 13 squadrons to fulfil the 32-squadron plan first mooted in June. But on the grounds that there seemed little likelihood of an attack on Australia and that Australia's cooperation with Britain in providing trained airmen was of vital importance, the Government again deferred a decision thus to build up the strength of the R.A.A.F. at home.

On 4th October the War Cabinet considered a cablegram sent on 26th September from the United Kingdom Government proposing that Australia should share in a vast cooperative air effort to provide 50,000 aircrew a year from all Empire sources—20,000 pilots and 30,000 other aircrew members—and should send a mission to Canada to confer on the proposal. Mr Menzies told the Cabinet that Australia's quota would probably be 3,000 pilots and 4,500 other aircrew. Goble, who was present at this Cabinet meeting, said that the 70 training aircraft then held by the R.A.A.F., plus 130 that could be provided from civil aviation, could train 1,000 pilots a year and that an additional 500 aircraft could train 2,500 a year; 700 aircraft would be needed to produce 3,500 pilots a year.

Next day the War Cabinet gave its approval in principle to the British Government's plan and agreed that an Australian mission, headed by Mr Fairbairn, should go to Canada as proposed by the United Kingdom. The Air Board was asked for a report on the plan and it was also decided that a leading business man, Mr F. B. Clapp,[7] should leave for the United States to investigate the purchase of training aircraft (if and when the United States *Neutrality Act* was amended) and to report on the delivery of Lockheed Hudson aircraft already ordered.

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[5] *Sydney Morning Herald*, 2 Oct 1939.

[6] *Sydney Morning Herald*, 28 Sep 1939.

[7] F. B. Clapp, General Manager, Aust Gen Electric Pty Ltd. 1932-46; Director of Purchases for C'wealth Govt in New York, 1939-42. Of Sydney; b. Melbourne, 28 Nov 1881.

By this time expenditure on the fighting Services was mounting so rapidly that the War Cabinet asserted that transition from peace to war did not imply that unlimited financial resources were available, and instructed all the Service boards to review their programs and report on what reductions and savings were possible.

A decision to provide the ground maintenance staff for the proposed expeditionary force was announced on 9th October. This was still only a force "on paper". Indeed the War Cabinet's approval, in principle, of Australian cooperation in an Empire air force was a very strong hint that planning on a vastly wider scope was going on behind the scenes, and this became much more than a hint when, on 10th October, the British Secretary of State for Air (Sir Kingsley Wood[8]) announced in the House of Commons the decision of the British Government to inaugurate an Empire air training plan.

A picture of the British Government's conception of how Australia might contribute to Empire defence had been given in a detailed appreciation sent by the Dominions Office to the Australian Government on 8th September. One hypothesis in this appreciation was that Japan was not only neutral, but friendly, and a second that she was neutral and "reserving her attitude" to democratic countries. Under the first hypothesis it was hoped that Australian military forces would be prepared for dispatch overseas—though the best destination and composition of any expeditionary force could not at that stage be suggested. The Commonwealth Government might wish to consider such forces relieving British forces in "say, Singapore, Burma and India" as they became available, or might prefer to delay dispatch of such forces until complete divisions could be available for a main war theatre. Under the second hypothesis the Government might think it unwise to send an expeditionary force, but the Commonwealth could assist by holding ready formations which could reinforce, at short notice, Singapore, New Zealand or the British and French islands in the Pacific. The reaction of the Chief of the General Staff to this was the realistic one that there was a third hypothesis—a hostile Japan. This, he said, could not be disregarded entirely and it was not safe to assume a more favourable situation than that Japan was delaying a decision. If Japan proved hostile Australian forces could be sent overseas only as a direct measure of Australian defence.

But the Dominions Office appreciation emphasised that the main weakness of the Allies was, as Menzies had pointed out, in their air strength against Germany, and that Britain looked to the Dominions, whose resources lay outside the range of German bombers, to ensure that this discrepancy was reduced as early as possible. Ways in which Australia could contribute to this were by the direct dispatch of complete units of the R.A.A.F. to Britain; by providing R.A.A.F. squadrons to release R.A.F. squadrons from overseas service so that they could be used for

[8] Rt Hon Sir Kingsley Wood. Secretary of State for Air 1938-40; Chancellor of Exchequer 1941-43. B. 1881. Died 21 Sep 1943.

home service; and by the supply of aircraft, material and trained men. Neither the direct dispatch of complete units to Britain, nor the provision of squadrons to relieve R.A.F. squadrons away from home were recommended as an immediate step because Australia's own home defence requirements and the fact that R.A.A.F. squadrons had obsolescent aircraft (due to delays in the British aircraft production program) made such a course impracticable. As soon as appropriate Australian squadrons had been re-equipped the substitution of R.A.A.F. squadrons for R.A.F. squadrons at stations overseas from Britain would be welcomed. It was also suggested that the Australian crews then in England awaiting delivery of Sunderland flying-boats should remain with their aircraft in England at the disposal of the R.A.F. This would give most valuable aid because of Britain's immediate need for squadrons for trade protection.

It added that what Britain needed most was a steady increase in the supply of all aircrew and she would be most grateful if the Commonwealth Government could consider to what extent its existing program could be modified to satisfy these needs, making, it was suggested, the maximum possible use of civil aviation resources for initial training. A flying training school, based on the R.A.F. establishment, should produce about 500 pilots a year and an air observers' school about 260 observers and 390 air gunners. It was appreciated by the United Kingdom that ultimately the Commonwealth would wish that complete Australian units should be formed and that these, in turn, should be amalgamated into an Australian contingent. The suggestions offered did not appear to be in conflict with this aim which could be achieved as and when there were adequate reserves of Australians in Britain to maintain the contingent.

Goble commented on this appreciation that it had always been the view of the Air Staff that the ultimate aim of the Commonwealth in giving air assistance to Britain should be to provide complete Australian units grouped into an Australian contingent for operations in the main theatre or a theatre of importance. The British Government's recognition of this was noted with pleasure. The first two of the methods for providing air aid suggested by the Dominions Office were the same, except that the destinations differed. Both envisaged dispatch of units complete with aircraft. In immediate terms this was impossible and, unless the American *Neutrality Act* was revoked, it would remain impossible for some time. Relief by the R.A.A.F. of R.A.F. squadrons serving away from Britain could be carried out as soon as the local situation and the supply of aircraft permitted. Dispatch of complete R.A.A.F. units to Britain would be very largely dependent on aircraft supply, and there was the added point that by the time this could be done the aircraft of the R.A.A.F. squadrons might not be equal to "Western Front" performances though suitable for action envisaged in the plan to relieve R.A.F. overseas squadrons. Australia could, however, in the very near future, supply squadrons without aircraft, which would be a compromise between sending squadrons to Britain and the supply of trained men as suggested in the third proposal.

Trained R.A.A.F. men could take over complete R.A.F. squadrons, allowing the R.A.F. crews and other staff to be withdrawn. The initial Australian force might take over squadrons in the Middle East, thus giving R.A.A.F. crews an opportunity for further training before going to an active theatre. The net gain to the R.A.F. would be the same in either instance and Australia could make a beginning with her own contingent. Men trained later should be organised into service units and sent overseas, complete with ground maintenance staff and ancillary services, as a complete contingent. Any excess of pilots and other aircrew members could go to the R.A.F. on loan until required for the expansion or reinforcement of Australian squadrons. There appeared little prospect of Australia supplying aircraft and material for a long time.

Goble noted that the Dominions Office assumed that the immediate aim of Australia was to dispatch trained men to Britain, but he assumed that this course, which was a matter for Government policy, was not correct, the immediate Australian objective being home defence. Even so he considered that by the extensive use of reservists and civil aircraft, the Australian training organisation could be expanded to meet local needs and at the same time initiate an overseas contingent if, in the first instance, R.A.F. aircraft and technical equipment could be taken over as R.A.A.F. squadrons relieved R.A.F. squadrons.

The Sunderland flying-boats being taken over by No. 10 Squadron, Goble agreed, should, with the crews then in England, be placed at the disposal of the British Government. He suggested that No. 10 Squadron should operate as an Australian unit in England and that the remainder of its officers and men, then at Point Cook, should be sent to Britain. As the local defence situation allowed, appropriate Australian squadrons should be sent to R.A.F. overseas commands, such as Singapore or the Middle East, to replace R.A.F. units.

On 20th October, the War Cabinet, having received reports from the Australian High Commissioner in London (Mr Bruce) on the views of the British Government, decided "for the present" not to proceed with its expeditionary air force plan. Then, on 31st October, came the Government's announcement of the cancellation of this plan, and next day the Air Board was instructed to plan Australia's contribution to an Empire air scheme. At the same time approval was given for the dispatch of crews to England to complete No. 10 Squadron.

The Government's decision to cancel the expeditionary force plan appears to have been based on two contentions: that Australia's resources of trained men would be fully employed in carrying out the Empire training scheme, and that Australia could not equip the six squadrons with modern aircraft. On the other hand Australia did not disband any of her existing squadrons in order to staff the training schools; on the contrary additional squadrons were soon formed. It is difficult to see why Britain should not have accepted the services of six squadrons manned by well-trained crews and equipped them overseas from her own

factories, as was happening with No. 10 Squadron and would soon happen with another. The net result was that, on advice from London, squadrons that might promptly have gone overseas remained in Australia and—an important consideration for the R.A.A.F.—a Force headquarters and three wing headquarters commanded by senior officers of the R.A.A.F. were not established in the theatre of war.

By this time, indeed, despite all the optimistic Ministerial predictions and estimates, the incapacity of the air force to absorb more than a mere fraction of the men applying for enlistment had become the subject of keen and at times hostile criticism—criticism that had been heightened by the rapid succession of changes in policy and planning. The Government did not lack an answer to the charges, but that answer was never adequately presented—a fact which, perhaps, was sound ground in itself for criticism. An after-the-event examination discloses such difficulties as the habitual dependence on Britain for a lead in air force policy and planning. As an example, the six-squadron expeditionary force offer was a big Australian gesture made within three weeks of the outbreak of war, but the British Air Ministry considered that the Empire Air Training Scheme was already superseding all other kinds of air aid from the Dominions; expeditionary forces were not wanted. And the Empire scheme itself, even under the high pressure of the urgency of Britain's need, took much time to initiate and organise, making decisions on major air force policy difficult, to say the least. Another serious disability was the lack of aircraft, both for operations and for training. Aircraft, more than any other weapon of war, were being subjected to the most radical changes under the influence of the changing conception of their tactical and strategical uses and the development of aeronautical science generally. Further, Australia's industrial development had not attained anything like the momentum needed to achieve an adequate output of modern service aircraft.

Criticism was being heightened by the dramatic content of the speeches by Mr Menzies and his Ministers. Thousands of enthusiastic volunteers, experiencing acute frustration because their services were not being accepted by the air force, could not be blamed for noting with some bitterness that, while Menzies was declaring that provision of trained airmen was of growing and vital importance, Australia's air force contribution to Britain's urgent needs was still almost entirely a matter of words, spoken or on paper. This was true except for No. 10 Squadron, some hundreds of Australian officers and trainees sent to England in the last few years and now serving with short-service commissions in the R.A.F., some R.A.A.F. officers on exchange, and a few others.

Early in November Menzies showed how conscious of this criticism he had become by referring to it in a national broadcast. He mentioned the ordering of Lockheed Hudson bombers from the United States and then spoke of the planning for the production in Australia, of Bristol Beaufort bombers, of "hundreds of training aircraft and engines", and of

large aircraft engines which would be used, not only to equip the Beauforts, but to make Australia more self-reliant in high-powered aircraft.[9] What he did not emphasise was the disturbing time-lag both in the delivery of aircraft from overseas and in the production of aircraft in Australia.

The Air Board had submitted to the War Cabinet an estimate of £800,000 for the construction of 350 Tiger Moth training aircraft and 500 aeroplane engines. On 10th October the Government approved an order for the building of these training aircraft at the De Havilland Aircraft Company's works at Mascot, and by the first week in November work had begun. It was then predicted that when the factory was in full operation production would be at the rate of one aeroplane a day.

Efforts were being made to complete the current R.A.A.F. program by June 1940, instead of June 1941 as originally planned. The order for Lockheed Hudson bombers from the United States had been increased from 50 to 100, and the Commonwealth Aircraft Corporation was accelerating its rate of production of Wirraway aircraft with six aircraft a week as its immediate production goal.

A decision of the full Cabinet on 28th October that the 6th Division of the "Second A.I.F." should be sent overseas when it had reached a suitable stage in its training was accompanied by a decision not to send a R.A.A.F. army-cooperation squadron with that force. This last decision was made for the same reason that caused the cancellation of the plan to send an air expeditionary force to Britain—a desire to concentrate on the Empire Air Training Scheme.[1]

It was now obvious that air force organisation had to be widened to span the dual purpose of home defence expansion, including the rearming of R.A.A.F. squadrons with modern aircraft, and an aircrew training program of hitherto unimagined dimensions to meet the needs of Australia's share in the Empire air plan. In deciding on its new pattern of organisation the Board had a choice between the geographical system—simply a matter of division into commands by specific boundaries—and the functional system in which formations would be established to carry out specific tasks (operations, training, maintenance, etc.) and which would command units concerned with those functions irrespective of their geographical location. But the Air Board held its hand on this issue. It became known to the Air Board that, on a Cabinet level, the question of importing a senior R.A.F. officer to fill the appointment of Chief of the Air Staff was once more being considered and, since the composition, and perhaps the constitution, of the Air Board was likely to change, no immediate revision of the basic organisation of the force was undertaken. Already the Government's rejection, on United Kingdom advice, of the air expeditionary force planned by its own advisers was an indication of lack of confidence in those advisers.

[9] *Sydney Morning Herald*, 4 Nov 1939.

[1] When it recommended the 6-squadron expeditionary force plan, the Air Board was unaware that the formation of the EATS was being considered by the British Air Ministry—*War Report of the Chief of the Air Staff, 3 Sep 1939 to 31 Dec 1945*, p. 10.

The twelve squadrons which, with ancillary units, formed the combat strength of the air force at the outbreak of war, were controlled by R.A.A.F. Headquarters through four station headquarters,[2] and there were, in addition, No. 1 Flying Training School at Point Cook, No. 1 Armament Training Station at Cressy, Victoria, and a liaison office in London. Adequate for a peacetime force of the size of the R.A.A.F. at that stage, this organisation was quite inadequate for a force that was to be expanded to operate over not only the entire Commonwealth but its external territories as well, quite apart from its overseas commitments, which, bound to be extensive, were as yet undefined.

Australia's first step towards the air defence of her external territories had been taken on 25th September, when the first R.A.A.F. unit to serve in New Guinea was established at Port Moresby. This was No. 11 Squadron[3] commanded by Flight Lieutenant Alexander,[4] which was equipped at the outset with only two Short "C" type flying-boats (originally Qantas Empire Airways' *Centaurus* and *Calypso*) requisitioned and converted for general reconnaissance.

On 13th November Mr Fairbairn, then in Canada, became the Commonwealth's first Minister for Air. The appointment was explained by the Prime Minister when he told Parliament that the machinery appropriate to peace was, in war, not only inappropriate but inefficient, and that no one Minister for Defence could possibly cope with administrative responsibility for the three Services. Therefore, "for the duration of the war", there would be a Minister for each of the armed Services and a Minister for Supply and Development. The activities of the departments of these Ministers would be coordinated by a Minister for Defence Coordination, who would be the Prime Minister himself.

As Mr Fairbairn was absent Mr Holt[5] was appointed to act as Air Minister until his return. Each Service Minister was also a member of the War Cabinet. Parallel with the decision to appoint a Minister for Air was the important consequential decision, on the same date, inaugurating the Department of Air as an independent Service department with Mr Coleman as its permanent head. Coleman's place as Secretary to the Air Board was filled by Mr Mulrooney.[6]

One of Holt's first tasks as acting Minister was to approve a recommendation by the Chief of the Air Staff that 38 advanced operational bases on the coast should be established to give extended range to aircraft engaged in seaward reconnaissance;[7] the bases to have refuelling,

[2] At Laverton (Vic), Richmond and Rathmines (NSW) and Pearce (WA).

[3] Formed at Richmond, NSW, on 21 Sep 1939, with 4 regular air force officers, 4 ex-Qantas Empire Airways officers, 12 regular airmen and 11 ex-Qantas airmen.

[4] Air Cmdre J. Alexander, OBE. Comd 11 Sqn 1939-41, 9 Sqn 1941, 10 Sqn 1942-43, RAF Stn Mount Batten 1943-45. Regular air force offr; of Brisbane; b. Brisbane, 3 Apr 1907.

[5] Rt Hon H. E. Holt. MHR since 1935. Acting Min for Air 1939-40; Min for Labour and National Service 1940-41 and 1949; Min for Immigration 1949-58; Treasurer since 1958. Of Melbourne; b. Sydney, 5 Aug 1908.

[6] F. J. Mulrooney, MBE. Secretary to Air Board 1939-52; Asst Secretary Dept of Air since 1952. Public servant; of Sandringham, Vic; b. St Kilda, Vic, 27 Dec 1900.

[7] Qld, 8; NSW, 6; Vic, 4; SA, 5; WA, 10; NT, 3; Tas, 2.

rearming and wireless telegraphy facilities. Of these bases, 10 were listed as urgent and expenditure for their development was provided.[8]

As a first step towards meeting the need to decentralise the R.A.A.F. organisation, two groups—No. 1 Group, with headquarters at Melbourne and No. 2 Group with headquarters at Sydney[9]—were formed on 20th November. This left R.A.A.F. Headquarters free to concentrate on major policy. The new groups controlled all flying operations within their area, except naval and army-cooperation training, and operations for the defence of trade, for which R.A.A.F. Headquarters retained full responsibility.

At this stage it became imperative for the Government to take action to formalise the constitution of the air force. Ever since the very brief *Air Defence Act* became law in 1923, after a fierce battle of words on the issue of the attempted incorporation of the Imperial *Air Force Act,* the R.A.A.F., for all practical purposes, had been administered by regulations. The intention to introduce fresh legislation to obviate this form of control had been left shelved through the years, but now, with the country at war and the various air forces of the Empire being drawn into close cooperation, perhaps even coordination, the R.A.A.F. was in need of a code of law. On 7th December the Government brought down a brief measure based on the code which had been adopted for the navy and the army and which was similar in most respects to that of the R.A.F. and the other Dominion air forces.

Mr Holt, who introduced the measure, explained that it would apply the Australian *Defence Act* to the R.A.A.F. One important issue—that of the position of compulsory trainees—was raised on the Opposition side of the House by Mr Blackburn,[1] whereupon Mr Holt obtained the Government's approval for an amendment which ensured that, unless they voluntarily agreed to do so, no "universal trainees" would be required to serve in the air force. With this and some other minor amendments, the Bill was passed through both Houses promptly.[2]

At the end of 1939 the composition of the Air Board was much as it had been at the outbreak of war, with Air Vice-Marshal Goble as Chief of the Air Staff, Air Commodore Russell (on exchange from the R.A.F.) as Air Member for Personnel, Air Commodore Anderson as Air Member for Supply, and Mr Langslow[3] (who, on 30th November, became Secretary of the Department of Air) as Finance Member. Each of the members was head of a branch and between them, the branches controlled twelve directorates.[4]

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[8] Cooktown, Rockhampton (Qld); Moruya, Evans Head (NSW); Mallacoota, Bairnsdale (Vic); Mount Gambier (SA); Albany, Busselton (WA); and Flinders I (Tas).

[9] No. 1 Group commanded by Gp Capt H. N. Wrigley, No. 2 by Gp Capt A. T. Cole.

[1] M. McC. Blackburn. MLA Vic 1914-17, 1925-34; MHR 1934-44. Of Essendon, Vic; b. Inglewood, Vic, 19 Nov 1880. Died 31 Mar 1944.

[2] Assent was reported in April 1940.

[3] M. C. Langslow, MBE. (1st AIF: Major Army Pay Corps 1915-22.) Finance Member Air Board 1937-40; Secretary Dept of Air 1939-51. Public servant; of Brighton, Vic; b. Maldon, Vic, 20 Jun 1889.

[4] CAS Branch: Operations and Intelligence, Organisation and Staff Duties, Works and Buildings, Signals; AMP Branch: Personal Services, Manning, Training, Medical Services; AMS Branch: Equipment, Technical Services, Aeronautical Inspection; Finance Branch: Stores Accounts.

Since no amount of organising, planning, equipment and training could achieve an effective war program without efficient recruiting machinery, it is appropriate here to examine first, the Directorate of Recruiting, or Manning as it was now known. Before the war it was customary for a board of seven officers to interview applicants for cadetships, a method that became obsolete immediately war was declared. In November 1939, the then Director of Manning, Wing Commander Cobby,[5] made a survey on the recruiting position and recommended the establishment of a recruiting depot in each capital city and 12 provincial recruiting centres. Thereupon centres were established in all capital cities and provision was made for provincial recruiting.[6]

It was from the recruiting field, as we have seen, that the chief grounds for public criticism arose. Even after three months of war had passed, comparatively few applicants had achieved any greater satisfaction than the knowledge that their names were included in a huge waiting list. By December the mass output of trained aircrews was still, as one newspaper aviation correspondent put it, "in the realm of planning". This correspondent wrote of the quenching of the enthusiasm of young men who were eager to become war pilots and deplored the "disappointment, confusion and even bitterness" which they experienced.[7] And the Service had to face this serious situation with the certain knowledge that the thousands of men offering would be needed urgently when the capacity of the force to absorb them had been developed.

One great difficulty was to obtain enough recruits for *all* musterings to ensure balanced development. In December 1939 there were 62 separate musterings for airmen, divided into five groups according to rates of pay. Three months later the number had increased to 67. The problem of maintaining proportionate strength was intensified by the difficulty in obtaining men for the technical ground staff musterings. And as this need increased, the Service found resistance in the industrial sphere, where there was anxiety about the training of mechanics to lower standards than the accepted ones. A pointer to this was a protest by the New South Wales Minister for Education (Mr D. H. Drummond) that the States were gravely concerned by the effect on industry of the Commonwealth's plan for the training of "many thousands of air force mechanics".[8]

Australia's manpower of service age was not inexhaustible and the difficulties inherent in that fact were increased by unavoidable inter-Service competition. There could be no question that the development of the R.A.A.F. had introduced a problem new to wartime recruiting. The air force required a high proportion of technically and professionally

[5] Air Cmdre A. H. Cobby, CBE, DSO, DFC, GM. (1st AIF: 4 Sqn AFC.) Director of Manning 1940; AOC HQ North-Eastern Area 1942; Cmdt RAAF Staff School 1943-44; AOC 10 Gp 1944, 1st TAF 1944-45. Regular air force offr; b. Prahran, Vic, 26 Aug 1894. Died 11 Nov 1955.

[6] Centres were established at Newcastle and in the Northern Rivers District, NSW, with two mobile units to each State of Victoria, New South Wales and Queensland, and one each to the States of South Australia and Western Australia. A centre in Hobart was also to be equipped for use as a mobile unit when required.

[7] *Sydney Morning Herald*, 5 Dec 1939.

[8] *Sydney Morning Herald*, 20 Dec 1939.

trained men. These were categories from which the other Services drew many of their potential commissioned and non-commissioned officers, and they were understandably reluctant to see the source of supply diminishing. To meet competition the air force had to engage, not only in direct publicity, but to use all the indirect appeal at its command; appeal such as was expressed by emphasis on the uniform of conspicuous blue (which included a collar and tie for all ranks) and a wide variety of musterings which might be expected to have an attraction for the young men whom all the Services urgently needed.

A situation had now been reached in which the air force, though unable to absorb anything like the number of men offering, was yet obliged to engage in a full-scale recruiting campaign. As this paradox became more sharply emphasised, a very practical, if incomplete, answer came from the Air Member for Personnel, Air Commodore Russell, on whose recommendation, in February 1940, men enlisted were placed on a call-up waiting list, given a special badge to wear, and provided with pre-entry instruction. In this way the air force endeavoured, and with appreciable success, to maintain the interest of those enlisted but not called up, and at the same time to attract new recruits.

But this represented only partial success. After six months of war the recruiting statistics revealed not only the extreme importance of this pre-entry plan but that the difference between the number of men offering and the number actually entering the Service showed little, if any, improvement. By 30th March 1940, 11,550 men had applied for enlistment as aircrew. Of these 4,617 had been interviewed and 1,973 selected, but only 184 had begun training, leaving 1,789 on the waiting list. For the same period, the figures for ground staff recruitment were: applications 56,777, selected 7,894, enlisted 5,346, on waiting list 2,548. Final responsibility for these problems rested, of course, with the Air Board, but the various directorates came in for their share of the difficult task of developing the Service machinery to the stage at which it could achieve an adequate intake of recruits.

By the constitution of the Air Board, Goble was the senior member and was responsible for coordinating policy and for the disposition of the force, command, employment, fighting efficiency, collective training, organisation, communications and works services. Under Goble at the head of the Air Staff was Group Captain Bostock,[9] who, on 1st September 1939, had been appointed Deputy Chief of the Air Staff, a post first superimposed on, and subsequently substituted for that of Assistant Chief of the Air Staff held by Wing Commander Jones.[1] The real importance of this change was in the authority given to the Deputy Chief to act for the

[9] AVM W. D. Bostock, CB, DSO, OBE. (1st AIF: 2 Sigs Tp and A and NZ Mtd Div Sigs 1914-17; 48 Sqn RFC 1917-18.) Director of Operations and Intelligence RAAF HQ 1938-39; Deputy Chief of the Air Staff 1939-41; Chief of Staff AAF SWPA 1942; AOC RAAF Cd 1942-46. MHR 1949-58. Regular air force offr; of Melbourne; b. Sydney, 5 Feb 1892.

[1] Air Marshal Sir George Jones, KBE, CB, DFC. (1st AIF: 9 LH Regt 1915; 4 Sqn AFC 1916-19.) Asst Chief of the Air Staff 1939-40; Director of Training RAAF 1940-42; Chief of the Air Staff 1942-52. Regular air force offr; of Melbourne; b. Rushworth, Vic, 11 Nov 1896.

Chief of the Air Staff, an authority not carried by the appointment of Assistant Chief. In keeping with this increased authority the Deputy Chief was made a member of a Joint Planning Committee. Bostock's main Air Staff role was that of Director of Operations and Intelligence, but, at the outbreak of war, his directorate had no specific organisation on which a comprehensive Intelligence service might be built. At this stage combat operations were far removed from Australia and the need for the development of Intelligence, though keenly appreciated by all concerned, was not immediately pressed.

In the branch of the Air Member for Supply, the Directorate of Technical Services, with Wing Commander E. C. Wackett as director, accepted a very heavy burden of responsibility from the first day of war. Items of equipment essential to the efficient operation of aircraft were often lacking and ways had to be found to offset deficiencies.

For its supply in aircraft and appropriate stores, the air force was then almost dependent on Britain, but Britain's preoccupation with the onslaught of the German forces, and the tenuous and vulnerable sea routes which lay between Britain and Australia, made it all too obvious that this dependence must cease, at least for an appreciable time. The true position, as the Prime Minister had indicated, was one in which the Dominions might well be expected to develop their aircraft industries so that they might supplement instead of drawing on British production. The immediate alternatives for Australia were thus her own production, still of infant proportions, and her best endeavours in the American market. But only moderate success was possible there in the face of the American arms embargo, still unrepealed, the, as yet, extremely limited capacity of the American aircraft industry itself, and the pressing demands for aircraft from both Britain and France who were both placing orders in the United States considerably above their theoretically permitted limit of expenditure.[2]

At the same time the Air Board was under pressure from the War Cabinet to control expenditure, and late in December it reviewed the aircraft on order from Britain in the light of short-range needs. No savings could be made, the board considered, in current allotments to the air force, but, as the planning of the E.A.T.S. indicated, the British Government was willing to make available without cost to Australia large numbers of Anson and Fairey Battle aircraft for its share in that vast plan. These were aircraft which, it was claimed, could be diverted from training to service use if circumstances demanded it. The board therefore decided that a substantial cut in the number of Beaufort aircraft on order from Britain would be justified. Delivery of 30 of these aircraft was outstanding in the current program and it was proposed that this number should be reduced to 14, it being felt that the British Air Ministry would be glad to take over the 16 other aircraft. In addition an order had been placed

[2] W. K. Hancock and M. M. Gowing, *British War Economy* (1949), p. 191, a volume in the civil series of the British official history of the war of 1939-45.

for a further 50 Beauforts from Britain. The Air Board considered that this order could also be cancelled with safety. The deficiency of 16 twin-engined aircraft in the current program could be made up eventually from locally built Beauforts.

The War Cabinet, on 22nd December 1939, approved these cancellations and also decided that the 14 Beauforts remaining on order from Britain should be delivered without engines, these aircraft to be fitted in Australia with Pratt and Whitney twin-row "Wasp" engines, 60 of which were to be bought in America.

On the engineering and maintenance side the difficulties were great. An example was the problem presented by the need for extended range for aircraft engaged in long and vital seaward reconnaissance. The Anson bomber, the only suitable aircraft available for these operations with the exception of a limited number of flying-boats, had to be fitted with additional fuel and oil tanks to give added range within safe technical limits. Douglas DC-3 airliners and the Short "Empire" flying-boats impressed from civil aviation had to be converted for service purposes and armed. These tasks had to be accomplished under pressure of time and with very limited numbers of trained technicians.

The two distinct and, in a measure, competitive phases of expansion set big problems for the Training Directorate. The first wartime Director of Training was Wing Commander Scherger,[3] who had held the post since February 1938. Scherger found an urgent task in providing sufficient flying instructors. It is understandable that at this time the whole of the training organisation was in a very fluid state.

Aircrew training for musterings other than pilots, demanded special consideration. In September 1939 there had been approximately 40 trained air observers in the whole of the force. These had been selected for air-observer training from certain basic musterings which included wireless telegraph operator, photographer, fitters, and armourers. There were also approximately 20 officer pilots who were classed as "navigation specialists".[4]

The peacetime decision to develop the Air Force Reserve to include commercial airline pilots and aero-club instructors was an aspect of the wartime link between civil and service aviation. An example of the capacity of the commercial airline operators to respond to the needs of the air force, was the signing up early in September 1939 of the first two crews from Qantas Empire Airways for active duty with the R.A.A.F. These crews[5] came into the fighting Service to operate flying-boats which

[3] Air Marshal Sir Frederick Scherger, KBE, CB, DSO, AFC. Director of Training RAAF 1938-40, 1942-43; comd RAAF Stn, Darwin 1942-43; AOC 10 Group 1943-44, 1st TAF 1945; Air Member for Personnel 1945, 1955-56; Deputy Chief of the Air Staff 1947-51; AOC RAF Malaya 1953-55; Chief of the Air Staff 1957-61. Regular air force offr; b. Ararat, Vic, 18 May 1904.

[4] With the introduction of the EATS the air observers' course was established. The first was completed at No. 1 ANS, Parkes, NSW, on 19 Dec 1940 with 38 successful trainees from the first intake.

[5] Capts C. R. Gurney and E. C. Sims; First Officers W. B. Purton and G. E. Hemsworth; Radio Officers J. R. Moyle and J. H. Willmott. First Officers later transferred from Qantas to RAAF were K. G. Caldwell, M. V. Mather, J. L. Grey, R. M. Hirst and L. J. Sloan.

were under charter from Qantas Empire Airways and to join, as we have noted, with regular air force men to form No. 11 Squadron.

The relationship between civil and R.A.A.F. flying training was, in fact, fully reviewed at a conference convened at R.A.A.F. Headquarters two days before war was declared. Originally it had been intended that civil air reserve training by various private and commercial flying organisations should be under the sole control of the Department of Civil Aviation. As the tension in Europe had increased the Cabinet had approved a plan which, it was hoped, would make a large proportion of aero club and commercial airline pilots available for the R.A.A.F. training program so that the current air force expansion plan could be quickened. The Air Board's contention was that training should be controlled by the air force while still conforming to the Government's policy that any efficient training facilities available in civil aviation schools should be used in preference to setting up permanent air force establishments. Such civil aerodromes and buildings as were needed to provide the additional accommodation required would be taken over by the Service and expanded. The Air Board also considered that there were sufficient preliminary training aircraft available to meet the needs of the then current R.A.A.F. training program.

The conference agreed that the four main aero club centres—Essendon (Victoria), Mascot and Newcastle (New South Wales), and Archerfield (Queensland)—should be used as training centres. On 22nd November 1939, Ministerial approval was given for the training of aircrew at 11 aero clubs and commercial aviation schools.[6] When R.A.A.F. staff was already based at an aerodrome it would supervise the civil schools established there, otherwise a staff of Service supervisors was to be appointed.

Early in the new year a form of contract was drawn up providing that the schools should train to the elementary stage of flying instruction under the direction of the R.A.A.F., each school accepting responsibility for the provision of suitable aircraft and equipment and their maintenance and repair, and the provision of qualified technical staff and flying instructors. Pupils were to be allotted on the basis of three for each initial equipment aircraft and not more than four to each approved instructor. The course was to be of eight weeks with an intake every four weeks. The R.A.A.F. was to be responsible for ground instruction and discipline.

As already noted the first flying training school had long been in operation at Point Cook. The first of the new schools were at Parafield (South Australia) and Archerfield (Queensland), where Nos. 2 and 3 Flying Training Schools were officially established. Soon these were renamed Elementary Flying Training Schools, Parafield becoming No. 1 and Archerfield No. 2. In January 1940 No. 3 was formed at Essendon and No. 4 at Mascot. It was estimated that of 92 pupils entering the schools with each four-weekly intake 80 would pass on for more advanced instruction. Thus

[6] Queensland Aero Club, Airwork Ltd (Qld); Newcastle Aero Club, NSW Aero Club, Airflite Ltd, Kingsford Smith Air Service Ltd (NSW); ANA Flying School, Victoria & Interstate Airways Ltd, Victorian Aero Club (Vic); South Australian Aero Club; West Australian Aero Club.

pending the initiation of the Empire scheme the training of aircrew continued at high pressure. Before the first Empire scheme trainees graduated, more than 400 new pilots, for example, had been commissioned. It was the training of these and other aircrew in this period that made possible the fairly rapid expansion of the home air force in 1940 and the steady reinforcement of the squadrons overseas.

Meanwhile the ever-increasing administrative duties of the Service demanded men with executive and professional ability. The development of the "Administrative and Special Duties" branch, as distinct from the "General Duties" branch (all officers qualified for flying duties) presented special problems. Civilians were being brought into the air force in increasingly large numbers. They had to be trained as speedily as possible in both routine and specialised duties covering the whole field of Service activity on the ground, and given as wide an appreciation of air force history, tradition and general practice as was possible.[8] Neither of the other fighting Services provided such contrast in outlook as that between the General Duties and the A. and S.D. officer in the air force. It is important to note the great responsibility this influx of civilians, a large proportion of them with no previous Service training, placed on the regular force from the day war began. The main weight of this responsibility rested with the Directorate of Personal Services.

Another air force directorate faced with special difficulties at the outset was that of Medical Services. A 12-year-old Ministerial order vested certain responsibilities for the Air Force Medical Services with the Director-General of Medical Services (Army), who despite R.A.A.F. objection was given general control over air force and civil aviation medical organisations. When war came this overriding authority, exercised by an officer of another Service, was considered illogical by the air force which had developed medical problems that were distinct from those of the other fighting Services. The remedy came later, but for a time the Director of Medical Services (Air), Wing Commander Daley,[9] who, in his own specialised field, was the proper person to advise the Air Board, had to defer and refer—always in principle if not always in practice—to the Army's Director-General.

Having surveyed the principal directorates as they were in the war's earliest stage, it is necessary to reconsider the command situation. We have already noted that the question of the appointment of a senior R.A.F. officer to the position of Chief of the Australian Air Staff was being considered at Cabinet level. When Goble had been appointed to this post in February 1939, he was, in the words of Mr Lyons (then Prime Minister), to "become Acting Chief of the Air Staff with the temporary rank of Air Vice-Marshal". Moreover, there were always those in high

[8] In August 1940 the School of Administration was opened at Laverton. As the demand for more "A and SD" officers increased other schools were opened.

[9] AVM E. A. Daley, CBE. DMS RAAF 1938-40; 1 Air Ambulance Unit ME 1941; DGMS Representative RAAF OHQ 1944; Deputy DGMS 1942-43, DGMS since 1945. Regular air force medical offr; of Melbourne; b. Bendigo, Vic, 23 Jan 1901.

political places who considered that the post he held should go to a British officer. Mr Fairbairn, an airman of some distinction who, as mentioned, had been made Minister for Civil Aviation and Minister assisting the Minister for Defence in April, and who was now the Minister for Air, was not one of these.

Fairbairn, on the day he was appointed Minister for Air, cabled Mr Menzies that he expected to fly to Australia via New York and Marseilles and would like Air Vice-Marshal Williams to travel with him from Marseilles to absorb the general principles of the Empire air scheme. It seems that at this stage Fairbairn was, very naturally, assuming that Williams would leave his appointment with Coastal Command, R.A.F., to resume the appointment of Chief of the Air Staff in Australia. However, at that time the Minister for Supply and Development, Mr Casey, very much senior to Fairbairn, was in London, and on 17th November Menzies informed Fairbairn that Casey was negotiating for the loan of an officer of the R.A.F. as Chief of the Air Staff; Menzies would like Fairbairn to go to London to form his own opinions about the officers available.

Already in October the Cabinet had replaced the Chief of the General Staff, Lieut-General Lavarack,[1] by a British officer, Lieut-General Squires,[2] who had been in Australia since 1938 as Inspector General. The First Naval Member, Admiral Colvin,[3] was an officer of the Royal Navy. The Government was now seeking a British officer to lead the air force also.

Fairbairn replied to Menzies on 20th November that, unless the Air Ministry would make available an officer of the "capacity" and "tact" of Air Marshals Mitchell[4] or Longmore,[5] he was "concerned at" the proposal to appoint a R.A.F. officer and would prefer to recall Williams. Mitchell and Longmore were both Australian-born; Mitchell then commanded in the Middle East where, in 1940, Longmore would succeed him. Next day Casey cabled to Fairbairn that he was advised that Air Chief Marshal Sir John Steel[6] was the best man available. (Steel was aged 62 and had been on the retired list for two years.)

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[1] Lt-Gen Sir John Lavarack, KCMG, KCVO, KBE, CB, DSO. (1st AIF: GSO1 4 Div 1917-19.) Chief of the General Staff Aust 1935-39; GOC Southern Comd 1939-40, 7 Div 1940-41, I Corps 1941-42, First Army 1942-44. Governor of Queensland 1946-57. Regular soldier; of Melbourne; b. Brisbane, 19 Dec 1885. Died 4 Dec 1957.

[2] Lt-Gen E. K. Squires, CB, DSO, MC. (1914-18: Maj Indian Army.) Director of Staff Duties War Office 1936-38; Inspector General AMF 1938-40; CGS 1939-40. B. Poona, India, 18 Dec 1882. Died 3 Mar 1940.

[3] Admiral Sir Ragnar Colvin, KBE, CB. Entered RN 1896. (With Grand Fleet 1914-18, in *Revenge* at Jutland.) Naval Attaché China and Japan 1922-24; President RN College, Greenwich 1934-37; First Naval Member Aust Naval Board 1937-41; Naval Adviser to High Commissioner for Aust in London 1942-44. B. 7 May 1882. Died 22 Feb 1954.

[4] Air Chief Marshal Sir William Mitchell, KCB, CBE, DSO, MC, AFC. Air Member for Personnel on Air Council 1937-39; AOC-in-C RAF in ME 1939-40; Inspector General of RAF 1940-41. Regular air force offr; of London; b. Sydney, 8 Mar 1888. Died 16 Aug 1944.

[5] Air Chief Marshal Sir Arthur Longmore, GCB, DSO. AOC-in-C RAF in ME 1940-41. Inspector General of RAF 1941. Regular air force offr; of Wentworth, Surrey, Eng; b. St. Leonard's, NSW, 8 Oct 1885.

[6] Air Chief Marshal Sir John Steel, GCB, KBE, CMG. (Served South African War; 1914-18 War with Grand Fleet and RN Air Service.) Transferred to RAF 1919. AOC RAF in India 1931-35. AOC in Chief Air Defence of Gt Britain 1935-36; Bomber Command 1936-37. Controller-General of Economy Air Ministry 1941-45. B. 1877.

When Fairbairn arrived in London he learnt that the choice was between Steel and Air Marshal Sir Charles Burnett,[7] 57, an Inspector General of the R.A.F., who had previously been in command of Training Command. It is evident that Fairbairn was annoyed at the way in which the choice of a new head of his Service had been largely taken out of his hands, and that he would have preferred Williams but now accepted the fact that the Cabinet had decided to appoint an Englishman. On 12th December he asked the Secretary of State for Air whether Burnett could be made available "at any rate for one year" and whether Williams could be released to assist him and be ready to take over later. The Secretary of State promptly agreed to both these requests, whereupon Fairbairn informed Menzies that he had arranged for Burnett to be Chief of the Air Staff for one year with Williams as Second Member of the Air Board. Fairbairn had informed Burnett that he would be promoted to the rank of air chief marshal and Williams that he would be promoted to the rank of air marshal.

At Marseilles on the way home Fairbairn learnt by cable on 21st December that Menzies wished that no commitment be entered into with Williams; Fairbairn replied that he considered the appointment of Burnett and the recall of Williams to be definite commitments.

Meanwhile, in Australia, Goble had been carrying on in frustrating circumstances. The difficulties that beset him and, indeed, the whole Air Board in this early war period are typified by the fact that the War Cabinet decided to support the British plan for an Empire air scheme without first consulting the board. Though this was only a decision "in principle" it was momentous to the Air Board. Again, we have noted that when the Air Board recommended the six-squadron expeditionary force it was unaware that the Empire plan was being considered in London, though this was known to the Cabinet. It is difficult to see how these officers could possibly have given their best service in such circumstances. On 21st December the War Cabinet recorded Goble's resignation. As mentioned, Fairbairn was then at Marseilles having entered into a firm agreement to appoint Burnett and Williams as Chief of the Air Staff and second member of the Air Board respectively.

That Goble's position had been made untenable was clear from newspaper reports published before the War Cabinet recorded his resignation. One of these reported "on reliable authority" that Goble would ask the Government to relieve him of his duties. After stating that Goble had declined either to confirm or deny the report, the newspaper added: "It is understood that he hopes to leave shortly for Great Britain where he will offer his services, in any capacity, to the R.A.F. It has been known in Government circles that the Ministers have been considering a reorganisation of air force administration in anticipation of the inauguration of the

[7] Air Chief Marshal Sir Charles Burnett, KCB, CBE, DSO. (1914-18: RFC and RAF.) Inspector General of RAF 1939-40; Chief of Air Staff RAAF 1940-42. Regular air force offr; of Kemnay, Aberdeenshire, Scotland; b. Brown's Valley, Minnesota, USA, 3 Apr 1882. Died 9 Apr 1945.

Empire Air Training Scheme."[8] Next day the same newspaper stated: "Although Mr Menzies declined to comment on the matter, it is understood that Air Vice-Marshal Goble wishes to resign 'on a matter of high principle'. It is known that he has been dissatisfied for some time with his relations with the Federal Government." Goble's resignation and Burnett's appointment were announced on 5th January.

In a press statement next day Mr Menzies said that Goble had explained to him that his desire to resign was not due to any differences between himself and the Government on air force policy or his relations with Ministers but to "differences of a personal nature".

Two days later *The Argus* (Melbourne) said: "Indicating the great importance attached by the Federal Government to the air force in the defence Services, Air Chief Marshal Sir Charles Burnett will be the senior of the officers at the heads of the fighting Services. It is generally admitted that the appointment of one of the two Inspectors General of the R.A.F. to the position is a great compliment, but many senior officers are nevertheless amazed that the appointment was made. They consider that the position could have been and should have been filled from the 'ranks' of the many highly efficient and experienced officers of the R.A.A.F." The newspaper also quoted the Federal Opposition Leader, Mr Curtin, as saying that the appointment of Burnett confirmed the opinion that Australian airmen were, for the duration of the war at least, to be engaged in building up the R.A.F. and not the R.A.A.F. "I find it hard to believe," Mr Curtin was quoted as saying, "that only personal reasons would account for Air Vice-Marshal Goble's severance with the Australian Air Force." This criticism was supported by a quotation from the leader of the Federal Country Party, Mr Cameron: "The present policy is tending to the belief that Australians are incapable of occupying some of the most important positions in the armed forces. This is in direct contradiction to the experience of 1914-18."

To this criticism Mr Menzies replied next day, newspapers quoting him as saying that it was based on a failure to recognise that the Empire Air Training Scheme would involve Australia in the development of an air force that would be 20 times greater in manpower than the existing force and, in organisation, five times greater. Australia would have the benefit of Burnett's experience and would not have to ask its limited number of relatively senior officers of the R.A.A.F. to undertake a task far beyond their experience.

Mr Fairbairn loyally tried to defend the Government's action, saying that the appointment had been made because there was no officer in Australia with the necessary experience of the large-scale flying training that would be required under the Empire plan. He added that he did not anticipate that Burnett's appointment would last more than the year for

[8] *Argus* (Melbourne), 20 Dec 1939.

which he had been engaged; his work in Australia should then have been completed.[9]

On the recommendation of Fairbairn, Goble was appointed head of the Australian Air Liaison Office at Ottawa, Canada, where the Empire plan was gradually developing, and where Australia's interests were to be considerable. Anderson was appointed Acting Chief of the Air Staff. On 11th February 1940 Burnett took over, and Williams rejoined the Air Board—of which he had formerly been senior member for 17 years—as Air Member for Organisation and Equipment.

The Ministers' reasons for appointing an officer of the British Service are not convincing. The tasks that lay ahead were "far beyond the experience" of the senior officers of the R.A.A.F., but they were far beyond the experience of the senior officers of the R.A.F. also. And it was not likely that in 1939 the R.A.F. would be willing to lend one of its more valuable senior officers to Australia. The only two who seem to have been made available appear to have been Steel, who was on the retired list, and Burnett, who was clearly then in what was intended to be his last posting before retirement.

It so happened that in 1918 Burnett, then 36, and Williams, then 28, had each commanded one of the two wings in the Palestine Brigade of the R.A.F. Williams' No. 40 (Army) Wing was the larger and formed the air striking force in Allenby's great offensive that opened in September of that year. Burnett's No. 5 (Corps) Wing was a smaller army cooperation force. Between the wars Burnett had served in the Middle East and India until 1921, had commanded in Iraq in 1932-34, and had held various posts in the United Kingdom. Williams had the advantage of having graduated from the R.A.F. staff college, the army staff college at Camberley, and the Imperial Defence College. Burnett had not attended a staff college, probably having been considered too senior for such a course by the time the R.A.F. staff college was opened. Having regard also to the fact that Williams knew the R.A.A.F. and its problems intimately and had been its senior and respected leader for most of its life, it is difficult to see what contribution Burnett was likely to make that was beyond Williams' capacity.

However, in those days senior officers of the British Services evidently seemed to some Australian Ministers to possess a glamour that their own senior officers lacked, and had not been able to acquire in their periods of duty with the R.A.F. on exchange.[1] Thus, by February 1940, the Australian Air Force found itself under the leadership of an elderly officer

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[9] *Argus* (Melbourne), 9 Jan 1940.

[1] As mentioned both Williams and Goble had served in senior posts with the RAF between the wars, and so had a large number of their juniors. In 1938 for example the following RAAF officers were on exchange: Air Cmdre F. H. McNamara, VC (Liaison Duties); Gp Capt A. T. Cole (Imperial Defence College); W Cdrs W. D. Bostock (6 Auxiliary Gp, Bomber Cd); J. E. Hewitt (Comd 104 Sqn RAF); Sqn Ldrs C. S. Wiggins (attached Civil Aviation), R. H. Simms (GR School, 17 Training Gp), J. R. Fleming and W. G. Rae (RAF Staff College), C. M. Henry (RAF Long Engineering Course); F-Lts J. R. G. McDonald (RAF College), R. H. Moran (RAF Signals Course), I. H. Smith, A. R. Tindal and B. C. Waddy (RAF Specialist Armament Course); F-O D. J. Macpherson (RAF Signals Course).

of the British Service; Williams and Goble were assigned to administrative posts; and, in consequence of the decision not to send away an expeditionary air force, the likelihood that the Australian regular officers in the senior ranks would obtain active-service experience seemed bleak indeed. The Ministers' decisions seemed likely to debar the officers of the senior and middle ranks from the testing for which, in circumstances that would have discouraged less ardent spirits, they had so long been preparing themselves.

CHAPTER 4

THE EMPIRE PLAN: DOCTRINES AND DECISIONS

TO understand how the Empire Air Training Scheme began we must recall the inconclusive discussions in London in 1936 when the possibility of achieving a coordinated Empire-wide air training plan was reviewed. It happened that Australia was represented indirectly at this conference by Air Commodore Goble who was then serving on exchange duty with the R.A.F. as Deputy Director of Air Operations. The proposals considered at this conference were rejected eventually by the 1937 Imperial Conference. The British Air Council, in October 1938, revived the idea of establishing flying training schools overseas, but the only result was the establishment of one school in Kenya.

The establishment of an Empire training plan had been under discussion in London again during the first three weeks of September and on 22nd September the Australian High Commissioner in London, Mr Bruce, adopted the typically direct method of telephoning the Under-Secretary for Air, Captain Balfour,[1] and outlining four primary points. The first was that pilot training should be approached from the standpoint of pooling the resources of Australia, New Zealand and Canada. The second was that the elementary training for each of the Dominions should take place in their own territories and, so far as possible, with equipment, including aircraft, produced by each Dominion. Thirdly, pilots from Australia and New Zealand, when they had completed their elementary training, should go to Canada for further training for which, he hoped, Canadian-built aircraft would be used, though probably Britain would have to supplement the supply. (Canada was then not so far advanced as Australia in the production of aircraft.) Finally, when their training had been completed, pilots would join squadrons of their own Dominion in Britain.

The next step towards a coordinated plan was the dispatch on 26th September of the cablegram, mentioned earlier, to the Canadian, Australian and New Zealand Governments, seeking their approval of a plan to form an Empire air force. It pointed out that Britain was vulnerable to air attack, lacked space for training schools, and needed more men than she could provide from her own resources; with the objective set at 50,000 aircrew members a year, it was estimated that Britain, from a population of 46,000,000, could provide only four-ninths of this total, leaving five-ninths to be found among the 19,000,000 people of European race in the three Dominions to whom the appeal was made. The cablegram tentatively suggested that these Dominions between them should establish 50 training schools. Elementary schools should be established in each Dominion according to its capacity, but advanced

[1] Rt Hon Lord Balfour of Inchrye, MC. (1914-18: 60 Rifles; RFC and RAF.) Parliamentary Under-Secretary of State for Air 1938-44. B. 1 Nov 1897.

schools should be concentrated chiefly in Canada which was closest to Britain and the war zone, could produce military aircraft and was near the aircraft factories of the United States. At the same time it was hoped that each Dominion would expand its aircraft production to the utmost. It was recognised that each Dominion would have first call on the men trained in the proposed schools. Finally the three Dominions were invited to send missions to a conference in Canada to discuss details.

The Australian War Cabinet, which held its first meeting two days after this cablegram had been sent, considered the proposals on 5th October, agreed to them in principle, and, as mentioned, decided to send to Canada an air mission led by the Minister for Civil Aviation (Mr Fairbairn). With him would be Wing Commander George Jones (Assistant Chief of the Air Staff), Mr Kellway[3] (financial adviser), and Mr Elford[4] (secretary). New Zealand also appointed a mission and on 13th October the two delegations sailed for Canada in company.

After the War Cabinet meeting the British proposals were examined by the Air Board which considered that about 1,000 elementary training aircraft would be needed to train the number of pilots proposed in the British plan and almost as many additional aircraft to train other aircrew. There were then in Australia only 224 elementary trainers, of which 164 were in civil use; probably about 160 of the 224 were in good enough condition to be used for instruction. These would suffice only to continue training on the present scale (including additional men needed for the expeditionary force of six squadrons then still a commitment) and provide from 500 to 600 pilots a year with elementary training for the Empire scheme. With its present equipment the Australian force could not increase the number of observers, gunners and wireless operators then in training. The number of instructors needed would far exceed the experienced men available, but these might at length be provided by using men returning to rest after operations. The project required deep examination and "in view of its magnitude must be regarded as a long-range one".

Outlining the basic plan in the House of Representatives on 14th November, Mr Menzies said it was designed to train "such large numbers of air pilots, observers and gunners as to make our ultimate personnel superiority to Germany in the air not only substantial but overwhelming". This aim was somewhat ambitious, since the combined population of the British Commonwealth and France did not overwhelmingly exceed that of Germany, but the statement served to illustrate the extent of the Government's support for the plan. The Prime Minister declared further that, subject to completing her own air defences, Australia should concentrate her resources and energies on the Empire Air Training Scheme. "These decisions were and are, I believe, not only sensible but inevitable,"

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[3] C. V. Kellway. (1st AIF: Lt 37 Bn.) Finance Member Air Board 1940-41; Dep Dir-Gen Aust War Supplies Procurement in USA 1942-45. Aust Consul-General in New York 1945-49; Aust Min to Rome 1949-54, to Brazil 1954-57. B. Melbourne, 2 Jul 1892.

[4] R. E. Elford. Public servant; of Melbourne; b. Chelmsford, Essex, Eng, 10 Apr 1910. Killed in aircraft accident 13 Aug 1940.

he said, adding that Australia would need every experienced flyer and every competent instructor who could be found; and must build or acquire hundreds of training aircraft and import other aircraft of various types for advanced training. This would add greatly to Australia's security in the air. In terms of men it would tend almost to make Australia a first-class air power. The Government, correctly interpreting, it believed, the wishes of the Australian people, would, as far as possible, preserve the Australian character and identity of any air force which went abroad. In the early stages Australia could not hope to provide anything more than a trifling fraction of the number of senior officers who would be required for the "air armada" which would come from the E.A.T.S., but, as time went on that position would correct itself.[5]

Mr Curtin, for the Labour Opposition, contended that the Commonwealth would have had more time to carry out the organisation the Prime Minister had outlined had the Labour party's policy been accepted instead of "being derided", and had efforts been made to place the air force on a sounder basis. In the meantime he was opposed to an expeditionary force leaving Australia for overseas service. If the efforts that were being made to restore peace failed, Australia's dangers would be increased and, while confronted by this uncertainty, Australia's manpower and more particularly the members of the air force who were trained or about to be trained should not be depleted.

Despite the assurance of the Prime Minister that the Government would "as far as possible preserve the Australian character and identity of any air force that went abroad" it was quite clear that the Empire plan cut across the policy pursued by the Dominions of maintaining fighting forces which were independent of those of the United Kingdom, though their doctrines, training and equipment were similar to those of the parent nation—indeed, were largely provided by them. Thus had been established the Australian and Canadian Navies, virtually self-contained, though in war largely committed to the control of the Admiralty in London. Thus, in the war of 1914-18 the armies of each Dominion—and in Australia's case the Flying Corps—had gained in individuality and national pride as the years passed. In 1918 a proposal for an amalgamation of the British navies had been rejected; a proposal for an amalgamation of the armies—for example that all reinforcements should go into a common pool—would not then have been entertained by the Dominions. Yet in 1939 the Australian Ministers and air force leaders agreed promptly to a plan whereby Australia's main effort in the war in the air was likely to be made by men contributed to a unified Empire force. What forces produced such ready agreement?

Perhaps the main factors were the sense of extreme urgency attached to the need for swift action to counter German air power and the manner in which the British Government took the initiative with a definite proposal. Each of the three Dominions was anxious to help, and each looked to

[5] *Commonwealth Debates*, Vol 162, pp. 1132-4.

Britain for advice in defence matters and seldom rejected it. The fact that the R.A.A.F. was a relatively young Service probably made the Australian Government less concerned to preserve its identity than they would have been if similar proposals had been made affecting their army or navy. And there was the hard fact that the United Kingdom considered that it could not produce enough aircrew to fly the aircraft that its factories could produce and its potential ground staff could maintain. Thus, even if each Dominion made its main air force contribution in the form of its own squadrons, wings and groups, Britain would still need to draw on the Dominions for aircrew. This, as we have seen, she had been doing in some degree in peace—already in 1939 there were as many Australian aircrew in the R.A.F. as in the R.A.A.F.

Records of the initial executive action that put the whole Empire air plan into motion show very clearly how decisive was Mr Bruce's contribution. It was characteristic of Mr Bruce that he should have a very clear conviction and that he should take prompt action to revitalise the plan that had been dormant since 1936. An Australian by birth and schooling, he had been at an English university and, in the earlier war, had served in an English regiment. Although for six years he had been Prime Minister of Australia, by 1939 he had spent more than half his adult life in England. To him the vision of a united British Commonwealth air force was likely to be stronger than to most Australian leaders. Other influences may well have been his nearness to the European scene where the upsurge of German air power was a dominating military theme.

When the conference opened at Ottawa early in November Lord Riverdale,[6] the leader of the British mission, said that it was proposed that the United Kingdom should provide about 22,000 of the 50,000 aircrew required each year, Canada about 13,000, Australia about 11,000 and New Zealand about 3,300.

The three Dominions were to be asked, between them, to recruit 1,200 pilots, 630 observers and 1,080 gunners each four weeks, a total of 2,910. Canada should provide 1,396 (including some trainees to be sent from the United Kingdom), Australia 1,164 and New Zealand 350. It was proposed that a first draft of 40 Australian pilots should arrive in Canada by 14th October 1940, and thereafter an increasing quota should arrive at intervals of four weeks: 200 by 21st June 1941, 320 by 3rd January 1942, and 400 by 23rd May 1942, air gunners and observers being provided in proportionate quotas.

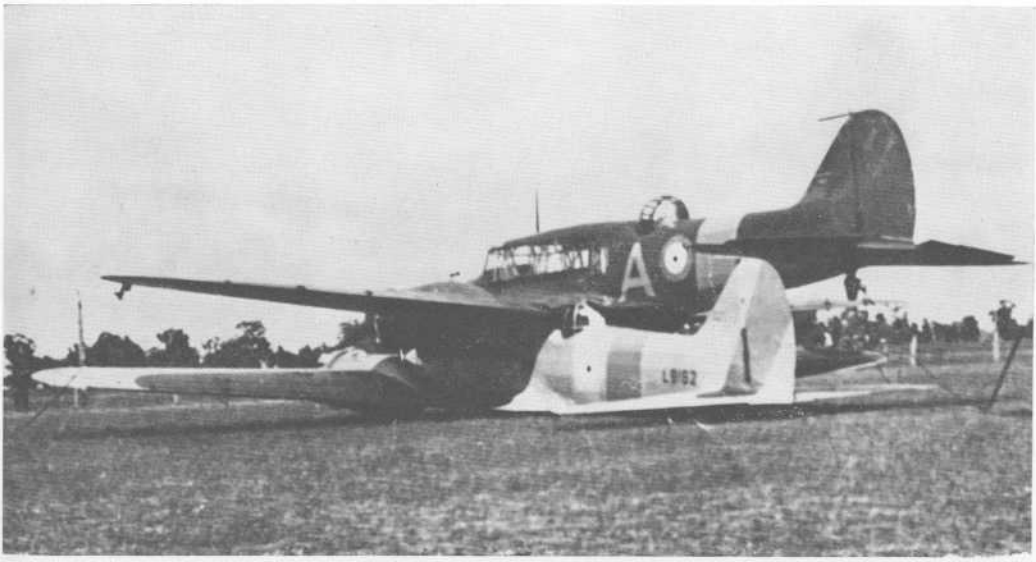
For pilot training it was proposed to establish 25 initial training schools in the Dominions—with 12 elementary training schools in Canada, 10 in Australia and three in New Zealand. All the corresponding 25 advanced training schools would be in Canada. With an intake of 1,200 for elementary flying training schools and an estimated output of 850 from service

[6] Lord Riverdale, GBE. Chairman UK Air Mission to Canada 1939-40; Chairman, Advisory Council for Scientific and Industrial Research 1937-46. B. London, 1873. Died 7 Jul 1957.



(*R.A.A.F.*)

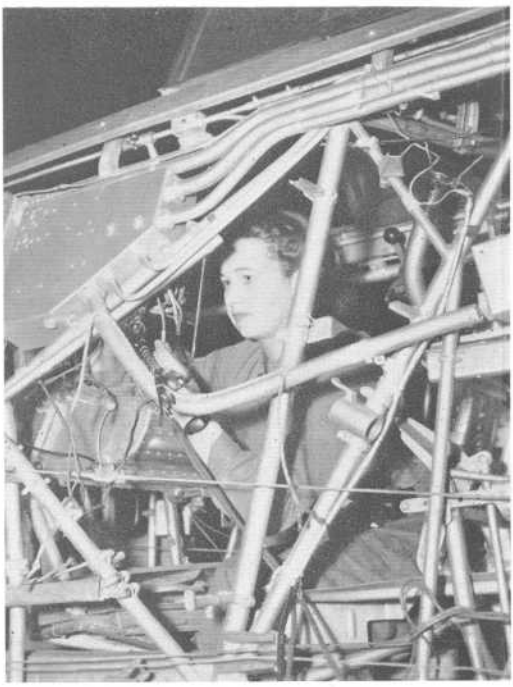
A typical scene at a R.A.A.F. Empire Air Training Scheme school for navigators. Trainees are being instructed how to correct a compass for error.



(*R.A.A.F.*)

Two Avro Ansons from No. 2 S.F.T.S., Wagga, N.S.W., which collided and became interlocked in flight, were successfully landed in a paddock near Brocklesby, N.S.W., by trainee pilot L.A.C. L. G. Fuller on 29th September 1940. Fuller was pilot of the top aircraft and, using the aileron and flap controls of this aircraft, was able to make a gliding landing of both with one engine still functioning on the lower aircraft. In England Fuller served with No. 37 Squadron, R.A.F., and was awarded the D.F.M. for an operation over Palermo, Italy, in September 1942 and soon afterwards was commissioned. Later he was returned to Australia and made an instructor at No. 1 O.T.U. at Sale, Victoria. He was killed near 1 O.T.U. while riding a bicycle on 18th March 1944.







(*R.A.A.F.*)

From a small beginning in 1940 the W.A.A.A.F. increased until by the end of the war it numbered 594 officers and 16,299 airwomen occupying 71 musterings. Seen above are airwomen performing the duties of instrument repairer, electrician and meteorological assistant.

schools, the estimated wastage was 16 2/3 per cent and 15 per cent respectively.

For observers initial training would be provided in each of the Dominions and subsequent training in Canada at 15 observer schools, 15 bombing and gunnery schools and three air navigation schools.[7] The monthly intakes and outputs were to be 630, 525, and 510 respectively, with a wastage allowance of 16 2/3 per cent at observer schools and 3 per cent at bombing and gunnery schools. Wireless schools were also to be formed in Canada for air gunner trainees from all Dominions and from Britain. The intakes at these schools would be 1,080 every four weeks (on courses of 16 weeks' duration) which would be reduced by wastage to 900 for entry into the bombing and gunnery schools where a further wastage of 3 1/3 per cent was expected.

Aircraft selected as standard for training were: elementary—Tiger Moths or Fleets; service—Harvards or Ansons; observer and air navigation—Ansons; air armament and bombing and gunnery—Fairey Battles.

Canada was to supply Moth airframes so far as possible, receiving engines from Britain. Harvards were to be obtained from the United States if the *Neutrality Act* was repealed; otherwise these were to be manufactured in Canada. Britain would provide the Anson airframes (minus the wings which would be made in Canada) and engines, in addition to all the components for the Fairey Battles. A statement on the aircraft manufacturing potential of the Commonwealth was sought. It was estimated that Australia would need 540 Moth airframes and 720 engines with an annual provision for wastage of 90 airframes and 72 engines. Australia was, of course, also making Wirraways (Harvards).

Lord Riverdale told Mr Fairbairn that the whole plan was based on the formation and reinforcement of 100 squadrons. If this proposal was completed, Australia and New Zealand, with shares of 40 per cent and 12 per cent respectively, would have formed and reinforced 52 squadrons, the cost being approximately £86,000,000. But maintenance in the field would commit Britain to an annual expenditure of £156,000,000. Britain at that time was spending 51 per cent of its national income on government and defence and would have to find £300,000,000 annually for the maintenance costs of the Empire air plan alone.

The quotas for the Dominions, as outlined in Lord Riverdale's analysis, did not seem to Mr Fairbairn to be equitable—the 48:40:12 per cent ratio for Canada, Australia and New Zealand was not in keeping with the Dominions' population ratio which was 57, 35 and 8. Canada's share had been reduced perhaps because of the large French-Canadian population; in 1914-18 Canada, though her population exceeded Australia's, had maintained a smaller army in the field. In a cablegram to the Australian Prime Minister, Fairbairn directed attention to the unequal quota-basis

[7] The syllabus of an air observer school included dead-reckoning navigation, signalling (morse and visual), reconnaissance etc; the air navigation school gave the trained observer (who had survived the air observer and bombing-and-gunnery courses) 4 weeks' instruction on astro-navigation.

and to the inclusion of the costs of the elementary training in Canada in the total divisible cost. This last, Fairbairn claimed, should be omitted as Australia and New Zealand would bear similar liabilities.

Fairbairn proposed to the conference that Australia and New Zealand should undertake a considerable proportion of their own service training, on condition that Britain allotted a proportion of her instructional staff for that purpose. This would reduce Australian and New Zealand difficulties in meeting dollar exchange and would also provide strategic advantages by building up air forces for their own defence. The British mission favoured this proposal, and tentatively it was suggested that 50 per cent of Australia's quota in advanced training under the original proposal should be trained at home while the other 50 per cent, after partial training at home, would go to Canada. Under this amended plan Britain would make available to Australia a very substantial contribution in service training aircraft.

On 10th November Menzies advised Fairbairn that all the elementary trainers and Wirraways for advanced single-engined aircraft training, could be made in Australia and still leave a surplus which would be available to New Zealand or the other Dominions. A new Commonwealth Aircraft Corporation trainer was also undergoing trials satisfactorily, and a proportion of the Anson wings required could be made locally.

Menzies supported Fairbairn's contention that the original proposals for sharing the costs were not equitable and held that it would have an adverse effect on local defence. Australia was making a large contribution to the Empire's naval defence and, apart from the Empire air plan, her defence expenditure when related to her population was greater than that of Canada. If the Commonwealth conducted a large proportion of its own service flying training, the costs of overseas training would be reduced and Menzies suggested that the proportion of service training in Australia should be greater even than the proposed 50 per cent.

Canada, too, claimed that she could not bear the cost of the share allotted to her and asked that Britain should bear the cost of freight charges, cost of making Anson wings in Canada, and of Harvard aircraft bought in the United States, in addition to any costs exceeding a contribution of $300,000,000. Fairbairn's reaction to this was to claim that, if Canada's requests were met, Dominion equality could be achieved only by similar concessions to Australia and New Zealand. Australia had no wish to add to Britain's burdens but could not be expected to share in the plan if the cost was shared unequally among the Dominions.

Lord Riverdale then announced that Britain would pay the freight charges for Canada and buy the Harvards Canada required. A comparable concession would be made to Australia. The next step was acceptance by Canada of a revised division of the costs of training in Canada on the basis of 72½, 22½ and 5 per cent for Canada, Australia and New Zealand respectively.

In the negotiations that followed it was agreed that Britain would bear the whole cost of the transport of trained men to Europe and of their maintenance in the field; a cost estimated at £300,000,000 sterling. In addition, the payment of pensions and gratuities at R.A.F. rates and the making up of any deficiencies in the Dominions' quotas of trainees were to be Britain's responsibilities.

Fairbairn, in a further message to the Prime Minister on 18th November, reiterated the point that Canada's proportionately high percentage of the estimated total cost of the plan was due to the retention of Canadian elementary training costs in the divisible total. But it seemed obvious to him that Canada would not concede anything further and that to press Australia's case would result only in the acceptance of even greater liability by the already overburdened United Kingdom.[9] The estimated cost of the entire plan to Australia—calculated to 31st March 1943—was $97,200,000. It provided for 5,920 pilots, 3,270 observers and 5,616 air gunners—a total of 14,806 trainees.

Fairbairn and Menzies discussed the whole problem by radio telephone on 21st November. To the conference Fairbairn was still contending that Australia's "ability" should be limited to a population ratio which would be approximately nine-tenths of the original proposal, and seeking a proportion of advanced training in Australia greater than the proposed 50 per cent. He did not advocate complete service training in Australia, advantageous though he considered that to be, because it would have an adverse psychological effect on the whole Canadian plan. He proposed that Australia should establish nine service training schools instead of ten —thus observing the population quota level. Seven of these schools should be in Australia and the other two in Canada.[1]

Another important point raised at this stage by Fairbairn and agreed to by the British Government representatives was that Dominion squadrons in the R.A.F. should be "labelled" to indicate their Dominion origin.

Menzies, on 22nd November, authorised Fairbairn to proceed to an agreement on the basis he had outlined, but expressed the opinion that the Australian quota for Canadian training should not exceed 8,000 in the three-year period. Nine elementary flying schools, seven service flying schools, and the required schools for other aircrew, would be formed in Australia if agreement was reached on the basis suggested.

This program was put to the conference in Ottawa, Fairbairn intimating that if it was not acceptable Australia would attempt the whole of her training within Australia on a population basis. The proposals were accepted, Canada finally capitulating on the issue of the cost of her own

[9] While this suggests that Canada was driving a very hard bargain at the expense of Britain, as indeed she was on this particular issue, the full picture of her contribution to the Empire's war effort is very different. That contribution was in fact more than generous. Never once did she refuse, or even question, British requests for financial support. In the course of the war she made very substantial interest-free dollar loans to Britain, financial aid which culminated in a free gift of 1,000 million dollars. Cf W. K. Hancock and M. M. Gowing, *British War Economy*, pp. 237 and 357.

[1] The original plan provided for five RAAF service flying training schools in Australia and five in Canada.

initial and elementary flying training, the whole of which she undertook to bear. Canada wished to have a separate agreement with the United Kingdom before any four-party agreement was made, and on 27th November Lord Riverdale and Mr Fairbairn initialled the four-party agreement, and it was signed by Bruce for Australia in London on 5th January.

This agreement provided for the training of what it termed Australian "pilots and aircraft crews" both in Australia and in Canada for service with the Royal Air Force. It became operative immediately. Australia would set up "as speedily as possible" an organisation which, when fully developed, would be capable of accepting every four weeks, 336 pilot trainees into elementary schools, 280 pilot trainees into advanced flying schools, 184 observer trainees and 320 wireless operator-air gunner trainees —a total of 1,120. From this organisation Australia would provide for the Canadian organisation: 80 pilot trainees for advanced flying schools (two); 42 observer trainees (for one school) and 72 wireless operator-air gunner trainees (for one school)—194 trainees every four weeks. Initial and elementary training of pilots and initial training of observers and wireless operator-air gunners would be completed in Australia. To help with the training plan in Australia the British Government undertook to lend officers and airmen in such numbers as would be agreed on, their pay and allowances to be paid by the Australian Government. Aircrew members who had been completely trained in Australia would be placed at the disposal of the British Government which would undertake that they would be identified as Australians either by organising Australian units or formations or in some other way as agreed between the two Governments. Britain accepted liability for the pay, allowances and benefits of all trained Australian airmen from the date of embarkation for service with the R.A.F. This liability was to be limited to R.A.F. rates and conditions, any supplementary payments to bring pay and allowances up to Australian rates would be borne by Australia.[2]

The first elementary flying training school was to open on 6th May 1940. Additional elementary schools were to be added at intervals of eight weeks for the first five schools and thereafter the interval was to be 20 weeks. On 10th May the first air observer and air gunner schools would open. In all Australia would have initial training schools for all aircrew and nine elementary and seven service flying training schools, four air observer, four wireless operator-air gunner, four bombing and gunnery schools and one navigation school.

Australia's estimated needs in aircraft for the E.A.T.S. program, as calculated to 1st March 1942, were: 591 Anson airframes (1,576 engines), 336 Fairey Battle airframes (448 engines), 315 Wirraways or Harvards (420 engines) and 486 Moths (648 engines). Britain agreed to provide up to 50 per cent of the initial equipment and immediate reserve

[2] Comparative rates were: trainee pilot (LAC)—RAF 7s 6d stg a day, RAAF 10s 6d Aust; graduate pilot (P-O) 14s 6d stg a day, RAAF 17s 6d Aust.

in engines for the elementary training schools' aircraft (Moths); all the Fairey Battle aircraft complete needed for bombing, gunnery and armament training (56 per cent to be target-towing aircraft); all Ansons for service flying, observer and navigation training, the first 150 complete and thereafter without wings, which would be made in Australia. Further, while Australia undertook to endeavour to make all Wirraway or similar-type aircraft, including engines and spare parts, which would be required for single-engined aircraft training, Britain agreed to pay Australia the value of the first 233 of these airframes and the first 291 engines, together with spare parts. Should Australia be unable to make all the airframes and engines of this type that were needed, Britain would supply Harvard airframes, Wasp engines and spare parts.

On 17th December, after seven weeks of negotiation, the four-party agreement was signed; the seals of four nations of the British Commonwealth were set upon a document that was unique in military history. The only other fully self-governing Dominion, South Africa, was making independent air training plans with Britain; plans more adapted to her difficult political circumstances.

This four-party agreement, which was to expire on 31st March 1943 unless an earlier date was set by common agreement among the parties, included *Article XV* in which Britain undertook that Canadian, Australian and New Zealand aircrews passing through the E.A.T.S. would serve in Canadian, Australian or New Zealand squadrons respectively, within the R.A.F.

The organisation to be established in Canada was to be able, every four weeks, to receive 520 trainees at elementary flying schools, 544 at service flying schools, 340 at observer and 580 at wireless operator-air gunner schools.

Australia was committed, on a proportionate basis, to provide two-sixteenths (68) of the pilot trainees needed for these service flying schools, and one-tenth each of the observer trainees (34) and wireless operator-air gunner trainees (58). New Zealand's commitments were one-sixteenth, one-tenth and one-tenth respectively, while Canada was responsible for all trainees for all elementary flying schools in the organisation and the remaining proportions for all other schools, subject to a reduction by not more than 10 per cent for trainees provided by Britain including, if desired, trainees from Newfoundland.

It was estimated that by the time the agreement expired the total output of Australian aircrew from the Canadian finishing schools would have been 1,836 pilots, 850 observers, and 1,450 wireless operator-air gunners; a total of 4,136.

To man this training organisation when the plan was in full operation Canada required 2,686 officers, 30,366 airmen, 4,929 civilians and 1,037 works maintenance employees.

The Canadian Government was to be responsible for operations within Canadian boundaries. The R.C.A.F. also held executive command over

the administration and operations of the plan, general supervision of which would be exercised by a supervisory board consisting of the Canadian Minister for National Defence (chairman), the Canadian Ministers for Finance and Transport, the Deputy Minister for Air, the Canadian Chief of the Air Staff, and representatives of all signatories to the agreement. All signatories were to appoint liaison officers to assist the board with criticism and suggestions, offered through the Canadian Chief of the Air Staff. Australia's representative on the supervisory board was the newly-appointed Australian High Commissioner to Canada, Major-General Sir William Glasgow, a distinguished Australian with a fine military record. His appointment dated from 10th January 1940 and the Australian Counsellor to the British Embassy at Washington, Mr Keith Officer, was appointed to act for him until he reached Ottawa.

The Australian and New Zealand decisions to reserve a large proportion of their training for their home organisations had affected the earlier financial proposals. The consequent reduction in training costs to $607,000,000 reduced Britain's contribution from $218,000,000 to $185,000,000. This was offset by Britain's contributions in kind to the Australian portion of the plan. After deducting Britain's contribution and the cost of Canadian initial and elementary flying training, the divisible cost of the Canadian training program stood at $354,000,000, making the three Dominions' financial quotas for advanced training:

Canada . . .	$285,466,000	(80.64 per cent)
Australia . . .	39,931,000	(11.28 per cent)
New Zealand . .	28,603,000	(8.08 per cent)
	$354,000,000	

In trainees the requirements of the whole E.A.T.S. plan was 2,844 every four weeks, classified thus:

	Pilots		Observers		WO-AG's	
	Intake	Output	Intake	Output	Intake	Output
Britain . .	62	42	33	26	—	—
Canada . .	562	400	303	246	576	464
Australia . .	432	306	226	186	392	314
New Zealand .	144	102	42	34	72	58
	1,200	850	604	492	1,040	836

Thus the vast and complex cooperative plan was developed to the point of operation. It was a remarkable achievement of united action after allowances had been made, contentions measured, and disagreements overcome, all of them understandable when the magnitude of responsibility for merging four distinct national wartime economies is considered. The delay in completing and signing the plan was due in part to lack of any definite terms of reference when the conference began. It became apparent, too, that in Britain there had been some failure to appreciate the develop-

ment of Dominion authority and capacity. Within the British Air Ministry the plan was regarded as too vast for Canadian officers to undertake and it was considered that a senior R.A.F. officer with his own staff would be required to take control; but Lord Riverdale had quickly found that the Canadian Government would agree to the plan only if the R.C.A.F. administered the whole organisation in Canada and retained executive command over it.

CHAPTER 5

THE NEW COMMAND

IN the early days of 1940, with Air Commodore Anderson acting as Chief of the Air Staff, the whole air force was working and thinking in expectation of the substantial changes in organisation and command that the new chief might introduce.[1] But in that interval the Air Board had not been idle. Despite its earlier decision to refrain from adopting a new pattern of organisation because it foresaw just such an appointment as Air Chief Marshal Burnett's, it had before it a revised plan for the war effort of the R.A.A.F. Preparation of this plan was virtually the last task performed by Air Vice-Marshal Goble before he resigned his appointment as Chief of the Air Staff. So far as it concerned the European war theatre it was based on reports from two Australian overseas missions—the one which, at Ottawa, had negotiated the Empire air plan and the other which, with Group Captain Bostock as its air adviser, had shared in the London Defence Conference. For further guidance on this phase there was a detailed cablegram to the Prime Minister from Mr Casey who, as Minister for Supply and Development, had been negotiating for defence supplies in London and visiting the army and air force in the field in France. This cable contained a proposal for the establishment of an Australian overseas base depot in anticipation of the arrival in Britain of the first of many Australian E.A.T.S. men from Canada and Australia.

In his outline plan Goble placed heavy emphasis on the decentralisation of the home organisation. He proposed that the home defence program of 19 squadrons should proceed, subject to No. 10 Squadron continuing to serve abroad and the "immediate" dispatch overseas of No. 3 (Army Cooperation) Squadron for training with the 6th Division A.I.F. and subsequent active service with that division. If Japan should side with Britain or observe a "benevolent neutrality" and the seas could be cleared effectively of German raiders, other squadrons might be sent to relieve R.A.F. squadrons in such places as Singapore and Egypt. Ground maintenance and administrative staff should be sent to Britain as they could be afforded and, together with Australian E.A.T.S. aircrews, "filtered" into R.A.F. squadrons which should then be taken over as units of the R.A.A.F. When Australian squadrons predominated on R.A.F. stations, station and group staffs should be sent from Australia to command them. Goble considered that the aim should be the formation of eight squadrons in each of the next three financial years, timed to meet the first output of aircrew, which would mean an additional commitment of about 2,500 administrative and ground staff each year. All aircrew in excess of those needed for these squadrons should be placed at the disposal of the R.A.F. To meet the needs of this plan the R.A.A.F. should have three major func-

[1] Burnett arrived at Darwin from London on 11th February 1940. The date on which he officially took up his new appointment, and formally took up his duties as Chief of the Air Staff at RAAF HQ was 15th February.

tional commands in Australia—Home Defence, Training, and Maintenance; and a R.A.A.F. base should be established in Britain for administrative and record purposes.

For the home defence air force, which would be responsible for all air operations throughout Australia and for all stations and units so engaged, Goble calculated on the establishment of five new squadrons—one fighter, two army cooperation, one general reconnaissance (landplane) and one general purpose—bringing the strength of the home defence force to 19 squadrons by June 1940.[2] Air Force Headquarters and the existing armament, signals, and engineering schools, equipment depots and No. 1 Flying Training School should all be expanded. For the proposed Training Command the Air Board favoured five self-contained groups formed on a geographical basis with a combination of units in each.

Thus Goble had planned. As for the immediate situation, by February some progress was being made with the training of civil pilots as instructors and Mr Fairbairn was able to announce that arrangements had been made for 236 experienced civil pilots to receive service training. On 28th February the War Cabinet reversed the decision of the full Cabinet in November 1939 and decided (as Goble seems to have assumed it would) that "for national and training reasons" an Australian squadron should accompany the 6th Division abroad.

As for the E.A.T.S. program itself, Mr Menzies, in a press statement issued next day, claimed that its adoption would mean that Australia's air strength would be increased seven times in aircraft[3] and eleven times in manpower. This buoyant statement referred to 591 Avro Ansons and 336 Fairey Battles to be provided by Britain as training aircraft but which were "considered capable of holding their own against any seaborne aircraft likely to be brought against them in Australian waters". The statement added: "The great increase in Australian air defensive strength, which is larger than that proposed by the Government's advisers for defence against the probable scale of attack, should in conjunction with the Navy and the Army, render the Commonwealth secure against any serious attack."

The new Air Board in its approach to the task of reorganisation to the pattern best fitted to the growing needs of the Service, agreed with Goble's assertion that decentralisation was essential. It began by dividing the home Service into four areas.[4] In this it followed the geographical method, the

[2] Additional establishments proposed included four recruit depots, six recruit centres, one engineering school, one central flying school (for instructors), six technical training schools, five aircraft depots (each with 1,000 officers and men), one equipment depot, two aircraft parks and two embarkation depots.

[3] By 1,242 machines to 1,454, including 212 first-line aircraft proposed in the Home Force development program.
Total strength proposed in the pre-war program to be completed by June 1940 was 5,542 including 408 general duties officers; E.A.T.S. planning to March 1943 would provide 30,473 aircrew, and 27,000 ground staff.

[4] Southern Area—all units in Victoria, Tasmania, South Australia and southern Riverina; Central Area—New South Wales except southern Riverina and northern New South Wales; Northern Area—northern New South Wales, Queensland, Northern Territory and Papua; Western Area—all units in Western Australia.

division being conditioned by the distribution of population and the use of existing stations and aerodromes as sites for flying schools, thus saving both time and money. The objective was to keep each area entirely self-contained in training, so that a trainee might remain in one area from the time he began his initial training until he embarked for service overseas. This allowed closer supervision of each trainee through the various schools, reduced travelling time, and simplified movement control. It was recognised that later, as the organisation expanded, subordinate groups would be needed; their form would be determined by experience. Nos. 1 and 2 Groups as they then existed provided the nucleus for the first two area headquarters, No. 1 Group in Melbourne becoming Southern Area headquarters and No. 2 Group in Sydney the headquarters of Central Area. The formation of Western Area and Northern Area was deferred, the tentative formation date being 1st October 1940.[5]

These areas had three basic defence tasks within their geographical boundaries: protection of naval, military and air force equipment and installations and all other vulnerable national centres against enemy air attack; protection of sea communications, including surface vessels, against submarine attack; reconnaissance of sea areas and enemy bases to provide Intelligence of enemy activity. If an attack was imminent, the air officer commanding in the area concerned was to assume operational control of all R.A.A.F. formations and units within that area.

The strain that was being placed on the technical services called for immediate consideration. After Ministerial conferences and discussions with the Air Board, Burnett first created the new post of Director-General of Supply and Production in place of the Air Member for Supply, a post until then held by Anderson. More and more the need for the local production of aircraft was impressing itself on the senior officers. It was clear too that much time was being spent on supply and production problems that lay outside the Service—problems that could be handled more properly by a separate staff—and that the obvious choice for the appointment of director-general would be a qualified civilian. The choice fell on Mr Robert Lawson,[6] Chief Engineer of the Postmaster-General's Department, who consequently had wide experience of industrial production and contracting methods. His main task was to procure, so far as possible, the needs of the Service that were drawn from outside sources, and he was also to control the overhaul of airframes and engines.

The additional appointment of an Air Member for Organisation and Equipment was made to the Air Board. The duties attached to this appointment, which was in keeping with the British Air Ministry's pattern,

[5] Formation of these areas was, in fact, deferred until early 1941; Western Area HQ formed in Perth on 9th January 1941 with Gp Capt De la Rue as AOC and Northern Area at Townsville, Queensland, on 8th May 1941 with Gp Capt Lukis as AOC. The first commander of Southern Area was Air Cmdre A. T. Cole and of Central Area Air Cmdre W. H. Anderson.

[6] R. Lawson, OBE. Deputy Director Postal Services, Vic, 1933-36; Chief Engineer PMG's Dept 1936-40; Dir-Gen of Supply and Production, Air Board, 1940-42; Staff Business Mgr RAAF 1942-44; Technical Asst to Chief of Air Staff 1944-45. Of Canterbury, Vic; b. Liverpool, Eng, 29 Feb 1880. Died 5 Aug 1949.

were the control of organisation and works services, all equipment stores and supplies within the Service and all repair and maintenance undertaken in Service establishments. The new post, as mentioned, went to Williams, who had now achieved the distinction of being the R.A.A.F's first air marshal and who, so recently from London, was well acquainted with the comparable organisation at the Air Ministry.

The duties of the Chief of the Air Staff were unchanged except that he was relieved of the responsibility for organisation and works services and was thus free to concentrate on high policy and the general direction of the air force. The branch immediately under his control, known as the C.A.S. Branch, had four directorates as had the branches of the Air Member for Organisation and Equipment and the Air Member for Personnel. The branches of the Director-General of Supply and Production and the Finance Member had three directorates each, which made a total of 18 compared with 12 at the end of 1939.[7] Anderson became Air Member for Personnel in place of Russell who returned to Britain. Langslow, Secretary of the Department of Air, continued for the time, to hold the additional appointment of Finance Member. Bostock, as Burnett's deputy, quickly established himself as the "right-hand man".

The R.A.A.F. Directorate of Operations and Intelligence joined with the navy and the army in planning the Central War Room—the operational fountain-head for the three fighting Services. In the War Room, situated at Victoria Barracks, Melbourne, the operational staff resources of the Services were to be pooled under the control of the three Chiefs of Staff, who met frequently so that there was coordination on the highest plane. An important adjunct was to be the Combined Operations and Intelligence Centre—abbreviated to C.O.I.C.—in which a staff of officers contributed by the three Services sifted all Intelligence material and provided the appreciations on strategical and other important problems on which the Chiefs of Staff based their war plans.[8] For specifically trade defence operations the naval and air forces were coordinated in Area Combined Headquarters (A.C.H.) established in the four focal areas—South-Western (Fremantle), South-Eastern (Melbourne), North-Eastern (first Port Moresby and later Townsville) and North-Western (Darwin). Each of these headquarters with its own C.O.I.C. (including a mercantile movements section) controlled the naval and air forces allotted to the area and had authority to initiate trade defence operations against the enemy.

For specifically defended ports, to which naval, military and air forces had been assigned, Combined Defence Headquarters (C.D.H.) had been set up, their purpose, as their name implied, being to provide coordinated

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[7] CAS Branch: Deputy CAS, Operations and Intelligence, Staff Duties, Signals; AMOE: Organisation, Equipment, Technical Services, Works and Buildings; AMP: Personal Services, Training, Recruiting, Medical Services; D-GSP: Supply, Production, Aeronautical Inspection; Finance: Chief Finance Officer (civil directorate), Senior Audit Officer (civil directorate), Stores Accounts.

[8] By direction of the War Cabinet both C.W.R. and C.O.I.C. were placed on a full-time basis on 27th February 1941.

operations to counter an enemy attack. In addition to the four centres at which the trade defence organisation of Area Combined Headquarters had been established, Combined Defence Headquarters were set up at Sydney, Brisbane, Adelaide, Hobart, Port Moresby, Newcastle and Thursday Island.

The other part of the Directorate of Operations and Intelligence, the section concerned specifically with Intelligence, was still in the developmental stage throughout 1940 and the first half of 1941. Notable in the inter-Service Intelligence structure was the coastwatching organisation which had been initiated by the Royal Australian Navy as an outcome of a staff paper produced as long ago as 1919, followed by joint Service talks in 1922. The organisation was subsequently developed by the Naval Intelligence Division to a high state of efficiency. It demanded not only very competent direction at the centre, but great individual courage and resource in the field.[9]

Before Williams was appointed Air Member for Organisation and Equipment, organisation was controlled by the Directorate of Organisation and Staff Duties, in the C.A.S. Branch. Organisation was now made a separate directorate, under the control of Williams, and was responsible for the detailed plans on which executive action by other directorates was based.

The effect of the changes on the Directorate of Technical Services, which was as old as the R.A.A.F. itself, was to divide its staff to meet the needs of both the new branches. The directorate, as such, was placed in the charge of the Air Member for Organisation and Equipment and the Director-General of Supply and Production was given two new directorates—production and supply. The first of these had responsibility for the Service aspects of local production, particularly in aircraft. Squadron Leader Armstrong[1] became Director of Production and Wing Commander Mackinolty[2] Director of Supply, with responsibility for the provision of all air force equipment and stores and representation on the Contract Board, the Department of Supply, and the Commonwealth Oil Board.[3]

For partial relief from the acute shortage of aircraft and spares, the technical services turned to development of repair, maintenance and salvage, facilities for which were then very inadequate. The increasing demands made by flying training were first met by centralising maintenance in training units and ekeing out resources by allocating repair work to civil engineering shops. Aircraft erection parks and depots were established

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[9] Eventually more than 700 watchers were stationed at coastal vantage points on the Australian mainland and island territories. For detailed studies see G. Hermon Gill, *Royal Australian Navy, 1939-42* (1957), Ch. 3, in the naval series of this history; and E. Feldt, *The Coast Watchers* (1946).

[1] Air Cmdre W. S. Armstrong, CBE. Deputy Director of Technical Services 1932-34, 1937-40; Director of Production 1940-42; Director of Technical Services 1942-45. Regular air force offr; of Melbourne; b. Melbourne, 4 Jan 1904. Died 29 Oct 1956.

[2] AVM G. J. W. Mackinolty, OBE. (1st AIF: 1st Half Flight and 2 Sqn AFC.) Director of Supply RAAF 1940-42; Air Member for Supply and Equipment 1942-50. Regular air force offr; of Melbourne and Korumburra, Vic; b. Leongatha, Vic, 24 Mar 1895. Died 24 Feb 1951.

[3] Representation on the Oil Board was transferred to the Directorate of Equipment at the end of 1940.

to deal with new aircraft. Central recovery depots were set up to reclaim urgently needed spares from crashed aircraft and other damaged equipment.

"Works and Buildings", or "Works and Bricks" as it was popularly termed in the Service, became one of the most important directorates at this stage because its own development was a controlling factor in the development of the whole Service. It began the war period within the branch of the Chief of the Air Staff with Squadron Leader Hancock[4] as director. All suitably qualified Citizen Air Force officers were called up to serve in the Directorate and civil engineers, architects and surveyors were enlisted as rapidly as possible. In the March reorganisation it was transferred to the new branch under Williams and, at Burnett's direction, a number of experienced general duties and equipment officers were released for work for which they had been basically trained while, after a review by a special committee, it was agreed that the directorate should be staffed partly by officers of the Commonwealth Department of the Interior. It was decided on 4th April 1940 that the directorate should prepare all preliminary plans under instructions from the Air Board, but that its officers should remain in the control of the department. The Works Director, Air Services, in the department, Mr E. Knox,[5] was appointed Director of Works and Buildings and later was given the honorary rank of group captain.

Aeronautical inspection was another phase of highly-skilled technical work that assumed a civilian aspect under war conditions, and was placed under Lawson's branch. Its Service practice dated back to 1928, but the 1940 reorganisation caused it to be placed on a civilian basis so that men with engineering qualifications and experience, who for various reasons were not eligible to join the R.A.A.F. might be employed. Approximately 28 members of the directorate were granted permanent civil appointments and 12 were seconded for duty with the re-formed directorate which remained in the control of its original director, Group Captain E. Harrison, whose experience of military aviation dated back to 1912. Inspection areas were established at Melbourne, Sydney, Brisbane, Adelaide and Perth, each with an inspector-in-charge and associate staff. As the Beaufort production program began, and aircraft and spare parts were impressed from the civil aviation field, the inspection staff was substantially increased.

The background for this highly-specialised work was, of course, Australia's aircraft industry which, though beset by many supply and manpower problems, was at last making appreciable headway. The Aircraft Construction Branch of the Department of Supply and Development was

[4] AVM V. E. Hancock, CB, CBE, DFC. Director of Works and Buildings 1938-40; comd 1 BAGS 1940-42; Director of Plans, Allied Air HQ 1942-43; SOA Western Area 1943-44; comd 100 Sqn and later 71 Wing 1945; AOC Malaya 1957-59. Regular air force offr; b. Perth, WA, 31 May 1907.

[5] Air Cmdre E. Knox. (1st AIF: 22 Bn and 2 MG Bn.) Engineer for NSW and member of C'wealth Shipping Board 1937-40; Director of Works and Buildings RAAF 1940-45; RAAF Representative Allied Works Council 1942-45. Civil engineer; of Manly, NSW; b. Benalla, Vic, 27 Jan 1899.

reconstituted on 21st March 1940 as the Aircraft Production Commission, a statutory body with authority over all aircraft production establishments in Australia. For the first three months the commission remained with the Department of Supply and Development, but in June, with the formation of a Department of Munitions, it was transferred to that department. Mr Harold Clapp,[6] who had resigned from the post of Chairman of Commissioners of the Victorian Railways to become general manager of the Aircraft Construction Branch, became the commission's chairman.[7] He was given over-riding executive authority. The commission's responsibilities extended to the control of aircraft and aero-engine production in Australia, the maintenance and operation of factories established or purchased by the Commonwealth for aircraft production, the making of agreements or contracts for the acquisition, manufacture or assembly of aircraft and for the overhaul and repair of aircraft, the supply either locally or from overseas of materials, tools and equipment, the development of local sources for the supply of raw and fabricated materials, and the control and limiting of profits from the manufacture of aircraft.

Late in 1940 the Aircraft Production Commission undertook the organisation of the overhaul and servicing of all trainer aircraft and engines by civilian contractors, and the R.A.A.F. Directorate of Aeronautical Inspection therefore established "resident" stations at Mascot, Essendon, Parafield, Archerfield, Maylands and Newcastle. The beginning of the Gipsy Major engine-production program in 1940 also entailed the sub-contracting of parts' manufacture in engineering shops scattered throughout Australia. Inspection of this work and of the final assembly of the engines at the General Motors-Holden's works at Melbourne was done by the directorate, which also supervised the manufacture of parachutes and their components.

As the air force expanded, an increase in flying accidents, chiefly in training, was inevitable. These caused periodic outbursts of press and parliamentary criticism and in June 1940 an Inspectorate of Air Accidents was set up to make confidential reports to the Minister on all serious accidents.

It was noteworthy that the enlistment of men of non-European origin was regarded by the War Cabinet as undesirable in principle but justified to provide for special needs. In the R.A.N. and the A.I.F. aliens and non-Europeans generally were declared to be "neither necessary nor desirable", but in February 1940 the War Cabinet had specifically permitted their enlistment in the R.A.A.F. at the discretion of the Air Board.

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[6] Sir Harold Clapp, KBE, Chairman Vic Rlwys Commrs 1920-39; Chairman Aircraft Production Commn 1940-42; Dir-Gen of Land Transport 1942-44. B. Melbourne, 7 May 1875. Died 21 Oct 1952.

[7] The other commissioners were: F. J. Shea and J. S. Storey (executive members), R. Lawson (Dir-Gen Supply and Production, Department of Air), A. S. V. Smith (chairman of the Contracts Board, Department of Supply and Development), E. R. Mitchell (representing the Treasury until Oct 1941), W. T. Harris succeeding Mr Mitchell as Treasury representative and V. F. Letcher (secretary).

By mid-April the strength of the R.A.A.F., which had numbered approximately 3,500 at the outbreak of war, was more than 9,000, but those on the waiting list were sufficient for the anticipated needs of the Service for the next six months. The immediate and the future needs in flying instructors were now assured and instructors in special subjects were being trained rapidly with the aid of a few R.A.F. officers who were provided to meet the R.A.A.F's deficiencies in this field. Trained pilots were now becoming available in sufficient numbers to meet the demands of the new Service and training units being formed or to be formed. Experience was showing that the "all-round" instructor no longer met the needs of the training program; instructors must specialise and consequently specialist courses were opened at Point Cook and instructors were graded for either elementary or service training. Link trainer courses were also begun.[8]

All was not well, however, with the use of facilities offered by the civil companies for flying training, and in April the civil school plan was abandoned because its financial basis presented difficulties and certain aspects of training were unsatisfactory. Some aircraft being used were, in the opinion of R.A.A.F. officers, of "questionable airworthiness". On 29th April the Instructors' Training Squadron at No. 1 Service Flying Training School, Point Cook, was separated and established with its own aircraft as the Central Flying School; in June it was moved to Camden, New South Wales. Its first commanding officer was Squadron Leader Bates,[2] R.A.F. Also on 29th April the first E.A.T.S. aircrew trainees were inducted at No. 1 Initial Training School at Somers, Victoria, where, in pre-war days, a boys' camp had been inaugurated by Lord Somers, a former Governor of Victoria. Its first commanding officer was Flight Lieutenant White, a member of the Commonwealth Parliament, whose parliamentary duties could not outweigh an enthusiasm for the air force born of his 1914-18 War experience and deep interest in civil flying between the wars. Under his command the first intake of E.A.T.S. trainees in Australia, 36 pilot pupils,[3] started training. The first program provided for a course lasting one month, but it was extended to two months to coincide with the Empire program and the elementary and service flying training schedules.

The first of its kind, this school demonstrated some of the early E.A.T.S. problems in Australia. It began with the disadvantage of a complete lack of Link trainers which had become almost an essential to primary flying instruction. Early in the school's history there was discontent among trainees who were asked to sign a form designating them as "air gunners"

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[8] This trainer was a hooded facsimile of an aircraft cockpit in which flying conditions were simulated to test the trainee's reactions and capacity. At later stages of training it was used to raise the standard of instrument (blind) flying.

[2] Gp Capt E. C. Bates, CBE, AFC, 29122, RAF. Chief Flying Instructor 1 FTS (later 1 SFTS) Point Cook 1939-40; comd Central Flying School Camden, NSW, 1940- , 37 and 39 SFTS's Canada 1942-44, 31 Base Stradishall, Eng, 1944-45. Regular air force offr; b. East Fremantle, WA, 9 Jun 1906.

[3] Twelve were from NSW, 10 from Victoria, 10 from Queensland and 4 from Tasmania.

and not "wireless air gunners". Parents wrote to the commanding officer complaining that their sons had been deceived as they thought they were to become pilots. Their complaints were sympathetically received and White proposed to R.A.A.F. Headquarters that, initially, all trainees should be described as "aircrew" and that they should be classified after entry into the school. Early records of this unit also noted the first appointment to the instructional staff of an air force school of a teacher from the Victorian Education Department, with the added comment that the department had been reluctant to release teachers for the E.A.T.S.

The education services of the R.A.A.F. at this time were being expanded as rapidly as possible. These were within the Directorate of Training with Wing Commander Sheath[4] as Principal Education Officer. In the beginning practically all the section's effort was directed towards some form of service training although general education was developed as circumstances permitted. The main problem was the common one of staff shortage. The Education Department's dilemma was great, for all the Services required teachers and in the R.A.A.F. the need was probably most urgent. A high educational standard was imperative in the building of an air force; it was vital if full use was to be made of trainees who possessed the aptitude but lacked the educational standard for graduation to the more highly qualified musterings. The pre-entry instruction of reservists on the waiting list also placed a big burden of work on the education officers. By the end of 1940 more than 7,000 reservists were receiving instruction and 1,500 honorary instructors were engaged at 400 centres in Australia. Towards the end of the year a Visual Training Section was formed. Using 16-mm sound films and 35-mm strip films in addition to printed pictorial material, this section developed an important phase of service training. While actual combat operations remained distant from Australia all operational training for the home squadrons was undertaken by the operational squadrons themselves, sufficient men for the various aircrew categories being drawn from E.A.T.S. service flying and other appropriate schools as needed.

Recruits for the ground staff came into two categories—those who needed service training only and those who needed trade training in addition. It was obvious that the demands of industry and the three fighting Services would soon exhaust the supply of skilled men and trade training was planned which aimed at turning unskilled recruits into competent tradesmen. Basic technical training was given by R.A.A.F. schools established in State technical schools and the trainees then went on to No. 1 Engineering School.

It was becoming evident to the Air Board that, with increasing commitments in aircrew and ground staff both for home defence and overseas service, it would not be long before there was a shortage of men. Establishment of a women's auxiliary for the R.A.A.F. had been under discussion

[4] Gp Capt H. C. Sheath, 253756. Directorate of Training and Educational Services 1940-44; Director of Educational Services 1944-45. Civil Education Officer, RAAF; of Ivanhoe, Vic; b. Sydney, 17 May 1907.

by the Air Board and in Ministerial circles for some months. These discussions had originated in a proposal by Mrs Bell,[5] then commanding officer of the Women's Air Training Corps, a voluntary organisation which had been in existence since April 1939, that the Air Board should consider the engagement of women for service in the air force. At that stage the Air Board took no action, but Mr Fairbairn, on his return from Canada, sought full particulars from the Air Ministry about the formation of the British Women's Auxiliary Air Force.

Mrs Bell, wife of Group Captain J. R. Bell, had since 1926 been a pilot and licensed ground engineer. She formed the W.A.T.C. in Brisbane to coordinate the efforts of a number of girls who were trying to train themselves at Archerfield to be ready to undertake aircraft work in the event of war. In September 1939 Mrs Bell went to Melbourne where her husband had been posted and was asked by an organisation named the Women's Voluntary National Register to form a division of the W.A.T.C. there. This division was soon about 1,000 strong and organised into ten squadrons each about 100 strong. Two of these trained on motor transport and one each in wireless telegraphy, stores, cooking, etc., photography and draughting, clerical work, as aircraft hands, on aero engines, on miscellaneous duties. Divisions of the W.A.T.C. were formed later in Tasmania, then New South Wales, South Australia and Western Australia. Mrs Bell became Australian Commandant, and each division had a commandant and staff. The members of the corps gave much voluntary service to the R.A.A.F. as drivers, clerks and so on. On 12th December 1940, the War Cabinet approved the formation of a women's auxiliary, subject to the approval of the Advisory War Council and to proof that the required number of male telegraphists were not available for the air force. Mr Fairbairn's successor as Minister for Air, Mr McEwen,[6] made it very clear that he did not favour the enlistment of women in the air force unless it was unavoidable, but unavoidable it became, as he admitted in January when all efforts to obtain sufficient male telegraphists had failed. At this stage it was estimated that there were 650 positions on the establishment of the force suitable for women.

Burnett had to counter considerable opposition as when, at a meeting of the Advisory War Council, Mr Makin[7] expressed the fear that the mixing of women with men on R.A.A.F. stations might create "difficulties". Burnett's answer was that in Britain the effect of W.A.A.F. and R.A.F. working together had been the reverse; it had benefited discipline.

[5] Flt Offr M. T. L. Bell. Comd WATC 1939-41; Acting Director WAAAF 1941. Of Melbourne; b. Launceston, Tas, 3 Dec 1903. Mrs Bell resigned in 1941 and rejoined in October 1942, at the request of the Air Member for Personnel, but insisted that she should receive no promotion above the rank of flight officer. She served thereafter almost entirely in the medical directorate.

[6] Rt Hon J. McEwen. MHR since 1934. Min for Interior 1937-39, for External Affairs 1940, for Air and Civil Aviation 1940-41, for Commerce and Agriculture 1949-56, for Trade since 1956; Deputy Prime Minister since 1958. Of Stanhope, Vic; b. Chiltern, Vic, 29 Mar 1900.

[7] Hon N. J. O. Makin. MHR 1919-46 and since 1954. Speaker House of Reps 1929-31; Min for Navy and Munitions 1941-46, for Aircraft Production 1945-46; Ambassador to USA 1946-51. Of Woodville, SA; b. Petersham, NSW, 31 Mar 1889.

So it was that on 9th January 1941 the Advisory War Council agreed that women should be enlisted—but only "to the minimum number for a minimum period".

On 24th February 1941 Mrs Bell was appointed acting director of the new service with the rank of flight officer, and on 10th March six more officers were appointed, all but one being former senior officers of the W.A.T.C.

> I was given an office containing two tables, one chair, one form, one telephone and nothing else and told to get on with it (wrote Mrs Bell later). Luckily I had been associated with the R.A.A.F. since its formation when my husband was one of the original officers so knew most of the senior officers and my way about generally.

In the face of great difficulties and marked lack of enthusiasm on the part of some male officers the recruiting of airwomen began on 15th March.

On 25th March McEwen, in the House of Representatives, announced the formation of the Women's Australian Auxiliary Air Force. Initial plans, he said, were for the enlistment of about 250 women as wireless and teleprinter operators and about 70 for administrative, cypher and domestic duties. The age range was from 18 to 40 years with an extension to 50 years in special circumstances. Enrolment was for a period not exceeding 12 months, which might be extended, and pay would be at the rate of approximately two-thirds of the rates for the corresponding ranks of airmen. Conditions for enrolment of officers were comparable to those for nurses.

Mr Makin replied for the Opposition, raising a series of objections which included the opinion that young men from technical schools could fill the vacancies in the Service for which women were now to be enlisted; that the formation of the W.A.A.A.F. would create a precedent for the army; that the Opposition disapproved of this means of securing "cheap labour" (rates of pay should be equal to those for men); that establishment of the auxiliary would enable the Government to send men overseas (to which the Opposition objected), and that "the air force was a man's job, anyway". But the increasing need overruled all objections.

Mrs Bell guided the new corps through its difficult early months and on 31st May resigned, having learnt that a new director was to be appointed from outside the service and that it was intended that Mrs Bell should be her deputy. The new director was Miss Clare Stevenson[8] who was given the rank of wing officer. By mid-November there were 49 officers and 698 airwomen on the strength, and a further 321 had been accepted for enrolment.

While the question of forming a women's auxiliary was being debated the related issue of recruiting generally was still presenting specialised

[8] Gp Offr C. G. Stevenson. Gen Sec YWCA, Rockhampton, Qld, 1929-31. Director of WAAAF 1941-46. B. Wangaratta, Vic, 18 Jul 1903.

problems. On 9th April 1941, the War Cabinet agreed in principle that a single recruiting organisation should be maintained for the army and the air force. Sir Donald Cameron,[9] who was giving notable service as chairman of the R.A.A.F. Volunteer Recruiting Drive Committee in New South Wales, was appointed chairman of the new organisation with Mr Banfield[1] as his deputy. A month later the War Cabinet considered R.A.A.F. recruiting specifically. At a conference between army and air force representatives held in October 1940 it had been agreed that members of the militia accepted for R.A.A.F. service might be released from the army if not regarded as indispensable, the R.A.A.F. undertaking to endeavour to conduct its recruiting early in the financial year so that men accepted for the air force could be "earmarked" as not available for army service. Facilities were given to R.A.A.F. recruiting officers to address militiamen in camp and to seek as volunteers members of the A.I.F. who were not under orders for embarkation.

On 27th February 1941 McEwen had secured the War Cabinet's approval for the formation of an R.A.A.F. cadet corps on a voluntary basis from youths, aged from 16 to 18 years, who proposed to join the air force at the age of 18. On 28th April 1941, the corps was renamed the Air Training Corps and Mr Robertson,[2] deputy chairman of the Victorian State Rivers and Water Supply Commission, who had had considerable experience with the organisation and training of air force reservists in Victoria, was appointed director with the rank of group captain. A nucleus of full-time R.A.A.F. members was posted to each wing of the corps, but otherwise it was staffed entirely by civilians on a voluntary part-time basis. The commanding, administration and instructional officers of each unit were given honorary commissions in the R.A.A.F. reserve, without pay.[3]

In the Directorate of Personal Services there was increasing proof of the need for a revision of the system of maintaining service records which were mounting rapidly as the R.A.A.F. itself expanded. The Records Section which had been formed in October 1939 came under review when the March 1940 reorganisation was in progress, and the British Air Ministry was asked to lend the R.A.A.F. an officer with wide experience in this work. The request was met promptly; Squadron Leader Goodwin,[4] R.A.F., was appointed officer-in-charge of records and within a month the section had an establishment for 6 officers and 164 other ranks.

[9] Col. Sir Donald Cameron, KCMG, DSO, VD. (1st AIF: Comd 5 LH Regt 1917-19.) MHR 1919-31, 1934-37. Chairman NSW Recruiting Drive Committee for RAAF 1940-41, of Joint Army-RAAF Recruiting Drive Committee 1941-45. B. Brisbane, 19 Nov 1879.

[1] C. R. F. Banfield, MBE. C'wealth Loans Director since 1940; Deputy Chairman Joint Army-RAAF Recruiting Drive Committee 1941-45. Journalist; of North Balwyn, Vic; b. Subiaco, WA, 9 Oct 1899.

[2] Gp Capt W. A. Robertson. (1st AIF: 10 Fd Coy Engrs and 2 Sqn AFC.) Director of ATC 1941-43. Engineer; of Melbourne; b. Albert Park, Vic, 30 Mar 1896. Died 12 Oct 1943.

[3] Commanders of the six wings formed, each of whom had a record of air service in 1914-1919 were: F-Os E. A. Cato (Vic), N. B. Love (NSW), W. W. Pike (Qld), Sir A. G. Barrett (SA), C. W. Snook (WA) and H. A. Wilkinson (Tas).

[4] Gp Capt N. T. Goodwin, CBE, 19020, RAF. Directorate of Personal Services, RAF and RAAF; Dep Dir of Postings RAAF HQ 1942-44; SPSO, HQ ACSEA 1945-46. Regular air force offr; b. Shoreham, Sussex, Eng, 21 Dec 1900. Died 8 Jul 1952.

The reorganisation in March also freed the Directorate of Medical Services from the control of the Director-General of Medical Services (Army) and the R.A.A.F. shared in the representation on the Services Medical Directors' Committee. The introduction of the E.A.T.S. called for an immediate expansion of the directorate which was accomplished on the advice of Group Captain Daley who had gained first-hand knowledge of the R.A.F. medical services when on exchange duty from 1936 to 1938. Mr Hurley,[5] a leading Australian surgeon, who in the 1914-18 War, after service on Gallipoli, had become Assistant Director of Medical Services, A.I.F., was officially appointed Director (subsequently altered to Director-General) of Medical Services in the R.A.A.F. with the rank of air commodore on 4th June 1940, with Daley as his deputy.

Another phase of air force development was emphasised in August 1941 when the Directorate of Operations and Intelligence was divided into two directorates as its name implied it might. With the formation of a separate Directorate of Intelligence Wing Commander Packer[6] became the first director. His task was to plan an organisation that could cope with the collection and distribution of air Intelligence which would help in the assessment of the enemy's order of battle. Added to these and other direct Intelligence responsibilities was security, not only as it applied to air establishments and administration, but to communications and information, including the use of adequate codes and ciphers, and general precautions in procedure and in selection of staff.

Control of the release of information to the public was in itself a subject of great diversity. British rules and procedure formed the basis for the Australian censorship system[7] though, in the initial days of the war, the Director of Military Operations and Intelligence exercised a general control over communications and publicity censorship with the Intelligence sections of the other two Services cooperating. This lasted until 7th September 1939, when the Prime Minister announced the establishment of a Department of Information with Sir Henry Gullett as Minister and Major Treloar[8] as director. Thereafter the censorship of press, broadcasting and films passed to the new department in which Mr. Jenkin[9] was chief

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[5] AVM Sir Victor Hurley, KBE, CB, CMG, VD. (1st AIF: 2 Fd Amb and ADMS AIF.) DGMS RAAF 1940-45. B. Melbourne, 3 Jan 1888. Died 17 Jul 1958.

[6] Gp Capt G. Packer, 251800. Director of Intelligence 1941-42; comd Fwd Echelon RAAF SWPA 1942-43; SOA 1st TAF 1944-45. Asst Inspector Admin 1945. Accountant; of Brighton, Vic; b. Melbourne 14 Apr 1900. (Packer was a graduate of the Royal Military College, Duntroon, and had served first in the British Army and then in the RAAF from 1924 to 1932.)

[7] Between the wars there had been discussions on a British Commonwealth-wide basis of the problems of censorship which was divided into two main divisions—communications and publicity. The Standing Inter-departmental Committee of Imperial Defence acted as the clearing house on questions of policy and there was a general coordination of regulations for the restriction of information to an enemy and the collection of Intelligence material from sources over which censorship was exercised. The British Ministry of Information, formed at the outbreak of war, though conceived in advance of that event, existed at once to inform the British people and exercise security control over news.

[8] Lt-Col J. L. Treloar, OBE. (1st AIF: 1 Div HQ and O i/c War Records Sec.) Director Aust War Memorial 1920-52, of Dept of Information 1939-41; Offr i/c Military History Section 1942-47. Of Canberra; b. Port Melbourne, 16 Dec 1894. Died 28 Jan 1952.

[9] P. B. Jenkin. Editor *News* (Adelaide) 1938-39; Chief C'wealth Publicity Censor 1939-41; Director Dept of Information 1941. Journalist; of Balwyn, Vic; b. Melbourne, 5 Aug 1895. Died 7 Sep 1941.

publicity censor. Representatives of the three fighting Services were appointed to the department which, in practice, deferred to each Service on all censorship specifically relating to it. A photographic committee was formed to control release of all pictorial material.[1]

Information and censorship, though opposed in principle, were thus linked in wartime practice. While the fighting Services needed publicity they also needed security protection and, though there were times when sharp clashes occurred between those who felt that information was dispensed with dangerous liberality and those who complained that the censorship, unnecessarily restrictive, was exercised on the axiom "if in doubt, cut out", this very opposition was a salutary check on each. So far as information—or public relations as the Services chose to term it—was concerned, within the R.A.A.F. there was, in the beginning, considerable conflict behind the scenes between zealous public relations officers and conservative permanent general duties officers.

Australia had been at war for nine months before action was taken to meet the need for a specific public relations organisation for the air force. With an intense recruiting campaign in progress and the strength of the Service growing daily, publicity was recognised as essential. Despite this the air force and the metropolitan daily press were in unhappy relationship—a relationship created by misunderstandings and lack of vision on both sides in the years immediately preceding the war. Senior officers of the Service, highly sensitive to public criticism and resenting newspaper stories which gave large headlines to air accidents, had adopted a rather autocratic stand and sought to prevent newspaper representatives from obtaining news, pictures and information generally. The newspapers accepted this as a challenge to what they declared were fundamental rights and to their capacity in news gathering, holding that their readers, the taxpayers, were entitled to know the worst as well as the best about a fighting Service for which they were paying. On the outbreak of war a truce was made and, Ministerial sanction having been given, a R.A.A.F. Public Relations Directorate was formed on 1st July 1940.[2] In that month Mr Leonard,[3] a senior member of the staff of the Melbourne *Herald,* was appointed director. He was responsible directly to the Minister through the Secretary of the Department of Air. Leonard introduced a Service newspaper *Air Force News*[4] which was self-supporting and which, together

[1] An example of the exercise of censorship of pictorial material for purposes of morale was provided by the War Cabinet when, in February 1941, it prohibited the publication of photographs of aircraft crashes in Australia.

[2] On 21 May 1940 Sir Keith Murdoch, managing director of *The Herald and Weekly Times Ltd,* Melbourne, was appointed Director-General of Information, responsible to the Prime Minister and with access to War Cabinet. He proposed that special men of the "news editor" type should be allotted to the three fighting Services and to the Munitions and Supply departments to "free" news and trace causes of complaints and so counter criticism. The policy he proposed was approved by War Cabinet on 19th June 1940.

[3] Maj R. B. Leonard. Director Public Relations RAAF 1940-41 (Hon W Cdr). Editor *Guinea Gold* 1942-44. Journalist; of Elwood, Vic; b. Melbourne, 13 Mar 1907.

[4] For security reasons *Air Force News* ceased publication after the entry of Japan into the war, Burnett and his Intelligence staff holding that it contained information which might help the enemy to determine the RAAF's order of battle. In April 1943 the directorate undertook publication of a fortnightly illustrated magazine *Wings* which was continued until the end of the war.

with his development of publicity through broadcasting services, did much to stimulate public interest.

In May, Leonard was succeeded by Mr McDonnell,[5] an experienced Queensland journalist who, like his predecessor, was appointed with the honorary rank of wing commander and who, responsible to the Minister alone for the publicity policy of the Service, approached it with enthusiasm and energy. However, perhaps because of the method of his appointment, his efforts were regarded coldly by some members of the air staff, a situation that was not altogether surprising when the Chief of the Air Staff himself was openly opposed to publicity and went so far as to deny McDonnell the right to attend a daily conference at which he met all other directors of the Service.[6]

The expansion of R.A.A.F. Headquarters was designed to cope with the expansion of the Service generally. A pointer to this was provided on 26th June 1940 when Fairbairn re-submitted the 32-squadron plan to the War Cabinet. The plan provided that the force should be increased by thirteen squadrons with ancillary units. Carrying the recommendation of both the Minister and the Air Board, it was left with the Prime Minister, the three Service Ministers and the Treasurer, for examination.

At this stage achievement of the current 19-squadron program was in sight except that Nos. 4 and 7 Squadrons each comprised only a nucleus, and formation of No. 5 Squadron had been deferred until there were more aircraft. The works construction program was satisfactory except that undertakings at three of the most important bases—Townsville, Darwin and Port Moresby—were still incomplete.

The War Cabinet's next step towards deciding whether to adopt the 32-squadron plan was to inform the Australian Minister to Washington, Mr Casey, that Britain had been obliged to suspend the export of Anson and Fairey Battle aircraft (the embargo still applied at this time) and ask him to examine the prospects of obtaining aircraft from America, but it was insisted that any Australian request must not prejudice Britain's requirements; the course of world events had, in four months, changed Menzies' optimistic picture of a seven-fold increase in aircraft rendering Australia secure from serious attack into one revealing a serious shortage.

To resolve doubts about the War Cabinet's intentions the Minister for Air, in a memorandum to the Secretary to the Air Board, explained that his recommendation that the force should be increased by 13 squadrons had been approved so far as its desirability was concerned, but that no consequential commitments such as the building of stations were to be accepted until it was known whether adequate aircraft were available. Despite this qualification planning was to proceed "forthwith".

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[5] W Cdr L. F. McDonnell, Director of Public Relations RAAF 1941-45. Journalist; of Canberra; b. Sydney, 3 Aug 1908.

[6] This situation led McDonnell to write subsequently that "in the early days of the war the difficulties encountered by PRO's in the discharge of their duties, which had been approved by the Minister, the department and the Air Board were almost insuperable. . . . The extraordinary change in the attitude of the Air Staff towards publicity before the end of the war, however, was adequate evidence of the value of good public relations."

The final step in achieving a nominal strength of 19 squadrons was taken on 9th January 1941 when, delivery from overseas of aircraft in limited numbers having been resumed, No. 5 (Army Cooperation) Squadron was formed at Laverton. Even then little more than a bare beginning —a headquarters and one flight—was made with this unit.

By the second quarter of 1941 the 32-squadron plan was being advanced again. Better and therefore more expensive aircraft were now being sought and the plan seemed likely to prove very costly. An authorised expenditure of £11,951,405 had risen to £15,798,065, a fact which caused Mr Fadden[7] (as Federal Treasurer) at a meeting of the War Cabinet in May to express concern at the "high standard and cost adopted by the Department of Air" in the layout and construction of R.A.A.F. stations. He had noted, he said, that the Board of Business Administration was constantly urging economy and that, though certain of the Air Board's recommendations had been adopted, there still were grounds for "considerable economy". In giving approval for the increased expenditure on the plan the War Cabinet directed that all departments must exclude non-essential provisions from their projects and that reasons should be given to the War Cabinet for any lag in the granting of authority for works approved. A report from the Air Board detailed the aircraft required for the program: 238 general reconnaissance bombers (Hudson or a substitute), 243 general purpose aircraft as replacements for Wirraways, 27 fleet cooperation aircraft to replace Seagull amphibians still in service but obsolete, 11 Catalina flying-boats, and 50 long-range, two-seater fighters. The War Cabinet cabled to the British Government asking whether it could meet any of these requirements. If early deliveries could not be promised the War Cabinet wished to know whether Australia might retain the 90 Beauforts being built by the Commonwealth for the R.A.F.

A matter of considerable interest to the air force was raised on 9th May 1941 when the War Cabinet discussed a recommendation by the Army Minister, Mr Spender,[8] that Lieut-General Sturdee[9] should be appointed Commander-in-Chief of the Australian Military Forces and Major-General Northcott[1] Chief of the General Staff, and that the Military Board should be abolished. Mr Fadden, then acting as Prime Minister during Mr Menzies' absence abroad, suggested that the application of similar principles to the air force would be raised. The then Air Minister (Mr McEwen) was strongly opposed to any such proposal, and said that with the existence of three separate commands—the A.I.F. in the Middle

[7] Rt Hon Sir Arthur Fadden, GCMG. MHR 1936-58. Min for Air 1940; Treasurer 1940-41, 1949-58; Prime Minister Aug-Oct 1941. Of Townsville, Qld, and Brisbane; b. Ingham, Qld, 13 Apr 1895.

[8] Hon Sir Percy Spender, KCVO, KBE. MHR 1937-51. Treas 1940; Min for Army 1940-41, for External Affrs 1949-51; Aust Ambassador to USA 1951-58. Judge of the Court of International Justice 1958- . B. Sydney, 1 Oct 1897.

[9] Lt-Gen Sir Vernon Sturdee, KBE, CB, DSO. (1st AIF: CRE 5 Div 1917-18; GSO2 GHQ BEF 1918.) CGS AMF 1940-42, 1946-50; GOC First Army 1944-45. Regular soldier; of Melbourne; b. Frankston, Vic, 16 Apr 1890.

[1] Lt-Gen Sir John Northcott, KCMG, KCVO, CB. (1st AIF: 12 Bn.) GOC 1 Armd Div 1941-42; CGS AMF 1942-45; C-in-C BCOF Japan 1945-46. Governor of NSW 1946-57. Regular soldier; of Melbourne; b. Creswick, Vic, 24 Mar 1890.

East, the A.I.F. in the Far East and the A.M.F. in Australia—maintenance of the Military Board system appeared essential for effective administration and coordination. Mr Spender replied that he was convinced that the appointment of at least a General Officer Commanding army field forces in Australia was desirable. The War Cabinet approved of this in principle.

Despite its intricacies, the timing of the E.A.T.S. program as a whole was good. The date of the induction of R.A.A.F. pilot trainees at Somers in Australia—29th April 1940—coincided precisely with the induction of trainees, mainly Canadian and none of them Australian, at Canada's first initial training school at Toronto, Ontario, where the intake was 169 cadets.[2]

The first meeting of the Supervisory Board set up to administer the plan in Canada was held in Ottawa on 24th January 1940. Its first chairman was Mr Norman Rogers,[3] Canada's first wartime Minister for National Defence, who had played a vital part in inaugurating the plan. But Rogers was not to live to see the fulfilment of his great task. Five months later, on 10th June 1940, an aeroplane in which he was flying from Ottawa to Toronto crashed and he was killed. For Australians this loss was much more than doubled when, only two months later, Mr Fairbairn, who had led the Australian delegation to the Empire Conference in Ottawa in 1939 and who as Minister for Air exercised considerable authority over the Commonwealth's contribution to the plan, died in similar circumstances. This accident, which occurred on 13th August near Canberra and in which all the occupants of the aircraft were killed, also cost Australia the lives of the Minister for the Army (Brigadier Street), the Vice-President of the Executive Council (Sir Henry Gullett), the Chief of the General Staff (General Sir Brudenell White) and Mr Fairbairn's private secretary, Mr Elford, who had been secretary to the Australian E.A.T.S. mission.[4]

When Sir William Glasgow arrived to take up his appointment as Australian High Commissioner in Canada he almost immediately began duty as a member of the board; his first attendance was on 8th April 1940. Early in the year the United Kingdom Liaison Officer in Chief, Air

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[2] At 30th December 1940 12,576 aircrew had been selected under the EATS and 7,861 more were awaiting final examination. Of those selected, 3,219 were training in Australia, 697 in Canada, and 120 in Rhodesia (total 4,036). Since 3rd September 1939 23,490 airmen had been enlisted, and 1,786 more were now on the waiting list; of these 7,906 were training in Australia for oversea service. The total strength of the RAAF (excluding men selected but not yet in training) was 1,896 officers and 30,187 airmen.

[3] Hon N. McL. Rogers. (1914-19: Canadian Mounted Rifles.) Professor of Political Science, Queen's University 1929-35. Min of Labour, Canada, 1935-39, of National Defence 1939-40. B. Amherst, Nova Scotia, 25 Jul 1894. Killed in aircraft accident 10 Jun 1940.

[4] As though those who had wrought so well in planning a vast Empire Air Force had not already paid too dearly in air casualties, still another of the original planners lost his life in an air accident before the war ended. Mr H. A. Jones, who had been a member of the British air mission to Ottawa in 1939 and who, as a British Civil Liaison Officer in Canada, had attended the first meeting of the Supervisory Board, was killed when a RAF Transport Command aircraft was lost near the Azores on 27th March 1945. Mr Jones, an honorary air commodore in the RCAF, was the author of the British official history of the RFC and RAF in the 1914-18 War. He had held a number of senior appointments at the British Air Ministry.

Chief Marshal Sir Robert Brooke-Popham,[5] attended two meetings of the board; on leaving Canada to become Commander-in-Chief in the Far East he was succeeded by Air Vice-Marshal McKean[6] who remained a member of the board until the E.A.T.S. ended. Shortly before the death of Mr Rogers the Canadian Government appointed as its first Minister for Air Mr Power[7] who had attended meetings of the board to assist Mr Rogers and who was to succeed him as its chairman. Air Vice-Marshal Goble reached Ottawa in August 1940 and from that time Glasgow had the benefit of his technical and Service experience.

Australia's first monthly commitment for Canadian training was 40 pilots, 42 observers and 72 air gunners. Having passed their initial and elementary flying courses in Australia, the pilot trainees in this quota made up the first draft. They left Australia in the *Awatea* on 5th September and disembarked at Vancouver on 27th September, nine months after the Ottawa Conference had created the Empire plan. There was keen interest in their arrival and their welcome by the Canadian Government and people was extremely cordial. After a formal welcome in which the Lieutenant-Governor of British Columbia took part, the airmen in their distinctive blue uniform marched through crowd-lined streets to entrain for No. 2 Service Flying Training School at Uplands, near Ottawa, which they reached on 30th September. Two days later they began flying training in Harvard aircraft. Earlier it had been decided that, training requirements permitting, Australian trainees would be allocated to units in quotas of not fewer than 15.

The 12-weeks course at Uplands was completed by the first draft just before the full effects of the Canadian winter had been experienced and at their passing-out parade on 22nd November, 37 of the draft were awarded their wings by the Australian High Commissioner before a gathering of Australian and Canadian friends.

With the second draft of 40 Australian pilot trainees who arrived in Canada on 25th October, and who formed the first intake into No. 3 S.F.T.S. at Calgary, came the first Australian wireless air gunners—71 in number. It was in October, too, that the first aircrew graduates from the Empire plan—12 Canadian air observers—were commissioned and sent overseas for active service.

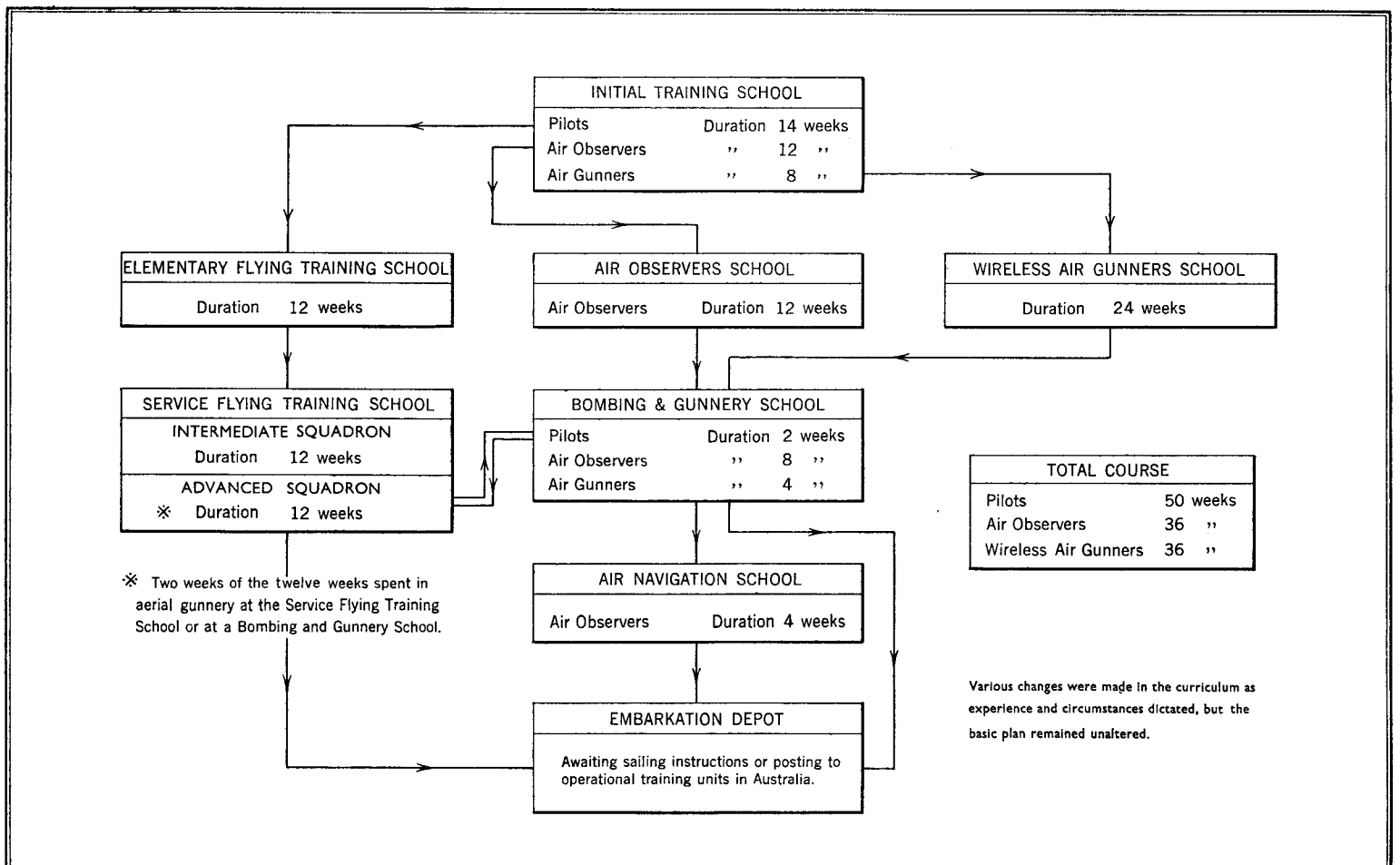
After the first two drafts of Australian pilot trainees the Australian contribution was increased to 80 for November and December. At the end of 1940 the total number of Australian trainees in Canada was 537, the total intake for the Canadian section of the plan being 10,147, compared with the planned intake for the period of 5,623. Of the 575 graduates to this date, all except 37 Australians from the first R.A.A.F.

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[5] Air Chief Marshal Sir Robert Brooke-Popham, GCVO, KCB, CMG, DSO, AFC. (1914-18: Maj RFC.) Inspector General RAF 1935-36; Governor of Kenya 1937-39; C-in-C Far East 1940-41. B. Wetheringsett, Suffolk, 18 Sep 1878. Died 20 Oct 1953.

[6] AVM Sir Lionel McKean, KBE, CB. (1914-18: RNAS and RAF.) Head of RAF Mission, Canada, 1940-45. B. 1886.

[7] Hon C. G. Power, MC. (1915-18: served overseas, A/Major.) Min of National Defence for Air, Canada, 1940-44. B. Sillery, Quebec, Canada, 18 Jan 1888.



The Empire Air Training Scheme—Australian curriculum

draft who had graduated at Uplands and had gone overseas were Canadians. Of the Australian graduates 13 had been awarded commissions. Twelve of these and 23 sergeants, all pilots, reached England on Christmas Day 1940.[8]

In Australia progress with the Empire plan throughout 1940 was satisfactory except that there was some lack of technical ground staff and that provision of equipment for instruction was lagging seriously.

Australian arrivals in Canada in 1941 began with a draft of 193 in January—79 pilot, 42 observer, and 72 wireless air gunner trainees. The February draft of 216 reflected the second increase in pilot quotas agreed to by the Australian Government—23 per cent. By March there were more than 1,163 Australian trainees in Canada—520 pilots trained or in training, 210 observers and 433 wireless air gunners. The acceleration in the plan as a whole was achieved by reducing the length of the courses.[9]

A new problem in E.A.T.S. development was revealed when the Air Board, in June 1940, had found that the intake of trainees was greater than either the Canadian or Australian sections of the program could absorb. The Australian Government therefore offered the British Government additional men for training either in Canada or Britain. The reply received by the Air Board on 6th July was that neither the Canadian nor British programs could accept higher quotas of Australian trainees for some time. As an alternative the British Air Ministry suggested that elementary flying training courses for Australian aircrews might be provided by the Government of Southern Rhodesia through the now well-established Southern Rhodesian Air Unit.[1]

In December 1939 the South African Air Force had offered to train British subjects and on 27th July 1940, at the request of the British Government, General Smuts, who had succeeded to the Union's Prime Ministership on the day before South Africa declared war on Germany, agreed to the transfer of R.A.F. training schools to the Union under arrangements comparable with those accepted by Canada. But Australia's

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[8] The operational training and active service of Australian aircrew in Britain, Europe and the Middle East are described in Volumes III and IV of this series.

[9] The original plan provided: manning depot 2 weeks; ITS 4 weeks (subsequently extended to 7 then 8 and eventually 10); EFTS 8 weeks (50 hours' flying); SFTS 16 weeks (divided into sub-sections for intermediate and advanced training); bombing and gunnery 2 weeks (abandoned before any pilots had graduated). Reductions in training time were made as from July 1940 so that the total pilot course was reduced from the original plan of 30 weeks to 25. In October the SFTS period was reduced from 14 weeks to 10 (75 hours' flying) and 3 courses of 56 trainees replaced 4 of 40 giving an SFTS peak of 168 trainees every 24 days. Increase in output was 40 per cent. In September 1941 ITS courses were lengthened to 7 weeks and in October to 8 to include time for navigation and other special subjects in these instead of subsequent courses. EFTS courses were extended to 8 weeks, later to 10 (60 hours' flying) and SFTS to 12 weeks (100 hours' flying), the SFTS intakes being increased from 56 to 58 to maintain output. (Intakes at Anson schools remained as previously owing to shortage of aircraft.) At the request of Air Ministry SFTS courses were again extended to 16 weeks as from 8th December 1941 and, as need for aircrew decreased, progressively to 20 weeks late in 1942. In March 1944 SFTS courses were divided into two—flying training in advanced trainer and advanced work with composite exercises. In June the course was extended to 28 weeks to provide post-graduate work, the course including 60 hours' flying and 145 of lectures.

[1] After a visit to South Africa by a RAF advisory mission in 1936 RAF officers were sent to reorganise the Southern Rhodesian Air Unit which, in its new form, began flying operations in July 1938.

interest was almost entirely associated with the Southern Rhodesian Air Unit.

On 24th May 1940 the first of four elementary flying training schools opened in Rhodesia and the organisation was developed to include four service flying training schools and a combined observer and air gunner school. The proposal that Australian trainees should be accepted by the Rhodesian training organisation was confirmed by the Rhodesian Government on 28th August and the Commonwealth Government agreed to send 40 trainees every four weeks to undergo all stages of training between the initial and the operational courses. The first draft left Sydney in the liner *Nestor* on 4th November and the second in the *Largs Bay* on 10th December, the date on which the first draft, which had disembarked at Durban, began training.[2]

The transit of these trainees to Rhodesia uncovered, incidentally, the poverty of R.A.A.F. administration overseas that had caused Williams much concern. Trainees arriving at Suez on their way to Rhodesia found poor administrative facilities for pay or the arrangement of their onward journey. An appeal by the R.A.F. for R.A.A.F. staff to cope with this need, though acknowledged and approved by the Air Board, was not attended to for some months. Meanwhile R.A.F. Headquarters, Middle East, not unreasonably, took what Burnett subsequently referred to somewhat tersely as "unilateral action", and appointed Wing Commander McLachlan[3] of No. 3 Squadron R.A.A.F. as liaison officer.[4]

Flying training conditions in Rhodesia were excellent. The chief drawback was dust in the summer months and, as the sealing of runways was regarded as too great a problem, air filtering was relied on to check the abrasive action of sand on engine cylinder walls; as in Australian experience this was one of the main contributing factors to aircraft unserviceability.

Of 674 Australians who entered Rhodesian elementary flying schools 564 graduated, 58 were re-selected as observers, and six as air gunners.[5] Of the 564 elementary school graduates, 514 passed out as pilots, 11 were re-selected as air observers, and one as an air gunner. There were 17 fatal training casualties from the service schools at which the average pilot wastage from all causes was 8.87 per cent. Over the whole of the training period the pilot wastage among Australians was 23.74 per cent and of that wastage, which totalled 260, 139 went to observer, navigator or air gunner courses. The over-all loss in aircrew was 13.50 per cent. Australians throughout were reported to have maintained a very much

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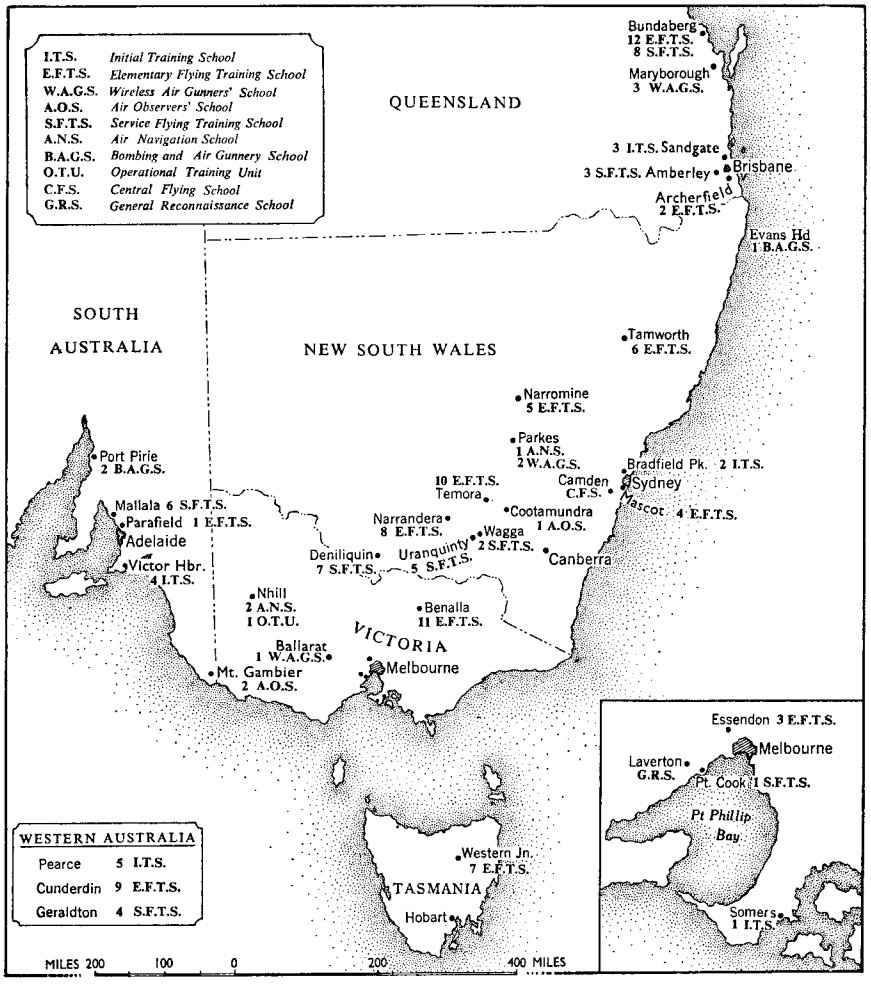
[2] In all, 12 drafts were sent to Rhodesia up to 7th January 1942.

[3] AVM I. D. McLachlan, CBE, DFC. Comd 3 Sqn 1940-41, RAF Stn Benina 1941, RAAF Stns Canberra and Laverton 1942, RAAF Wing New Guinea 1943, 81 Wing 1945. Regular air force offr; of Melbourne; b. South Yarra, Vic, 23 Jul 1911.

[4] For a detailed account see J. Herington, *Air War Against Germany and Italy, 1939-43*, in this series.

[5] The few Australians associated with the SAAF training program were mainly trainees re-selected from pilot to air observer category and transferred to South African air observer schools before the Rhodesian Air Unit had arranged for such training.

higher standard than the average for the whole Rhodesian program. The R.A.A.F. liaison officer in Southern Rhodesia reported that station commanders repeatedly asked for more Australian cadets. Of 583 Aus-



E.A.T.S. schools for aircrew, December 1941

tralians who graduated in the various aircrew categories 156 were granted commissions (26.76 per cent of the total) on a basis comparable with that of the E.A.T.S. elsewhere—33 1/3 per cent on graduation for pilots and observers and 20 per cent for air gunners. Recommendations far in excess of the allotted percentage were received for Australian trainees, indicating anomalies in the commissioning system. The air liaison officer

reported to the Air Board: "Officers commanding state that they find great difficulty in omitting some Australians on the course who must be omitted if they keep to the 33 1/3 per cent rate. They say these trainees are far ahead in type and leadership of trainees from other sources."

Training in Australia had now expanded to such an extent that it became necessary to make its control independent of the areas into which the whole Service organisation had been divided in March 1940. On 2nd August 1941 two training groups—No. 1, with headquarters in Melbourne, and No. 2, with headquarters in Sydney—were formed on a part-regional, part-functional basis. Central Area was disbanded and its units divided as convenient between Northern Area, Southern Area and No. 2 Training Group.

A frequently-recurring problem for the War Cabinet in this period was the retention of the identity of Australians serving with the R.A.F. under the Empire plan. Mr Menzies had written to Mr Bruce on 26th March 1940 to guide him on this subject when taking part in a conference between representatives of Britain, Australia and New Zealand in London. First, the Australian Government sought that R.A.A.F. men should have the right to continue wearing their own distinctive uniform; Australia would meet any expense above that of the R.A.F. uniform. Further, R.A.A.F. aircrew should be grouped into squadrons, though it was realised that, particularly at first, composite squadrons would be unavoidable. When Australians provided 75 per cent or more of a R.A.F. squadron that squadron should then become known as an Australian squadron of the R.A.F. Officers from the Australian home defence force, either on exchange with R.A.F. officers or on direct loan, should command these squadrons and their flights. This was desirable not only to establish the Australian identity of the squadrons but to give officers of the home defence force experience in a war theatre. Menzies informed Bruce that if this system could not be arranged the effect on the morale of the R.A.A.F. would be "disastrous". Australia also desired that more senior officers should serve with the R.A.F. and that such officers should go overseas in advance of the R.A.A.F. trainees they might command. If, later, without endangering the capacity of the R.A.A.F. to meet its commitments for the E.A.T.S., it was possible to send ground staff overseas as well as aircrew, that would be done, these airmen being made available to the R.A.F. on the same conditions as those applied to the aircrews and for posting to the same squadrons. Since Britain would bear the financial cost of such squadrons it was not suggested that they be called R.A.A.F. squadrons. But, if Canada established the right to designate squadrons as being of the Royal Canadian Air Force, there seemed no reason why Australia should not have the same right, Menzies added. Each Australian R.A.F. squadron should be affiliated with an appropriate squadron of the R.A.A.F.; its record would then be added to the traditions of its R.A.A.F. counterpart.

The desire that Australians should gain senior command experience in the theatres of war was entirely commendable, but in fact, as will be seen, very few R.A.A.F. officers in the senior and middle ranks were to obtain active service experience in the war against Germany and Italy in 1940 and 1941.

The question of establishing overseas a R.A.A.F. base depot, which Casey had raised in a message to Bruce in 1939, was also becoming urgent. Air Chief Marshal Burnett, on 20th November 1940, after conferences with the Air Board decided that a nucleus staff headed by Group Captain De La Rue[6] should be sent to Britain. But he had reckoned without Mr Langslow who, though no longer Finance Member or, at the time, a member of the Air Board, was responsible to the Minister for the higher financial direction of the Department of Air of which he was the permanent head. Langslow promptly objected to the overseas base proposal, for the formation of which, he claimed, the R.A.A.F. had no obligation since the British Government had accepted liability for all disembarkation, pay and maintenance facilities. The Air Ministry was again consulted and this time the Air Board was informed that an Australian base depot was considered unnecessary. Mr Bruce and Air Commodore McNamara,[8] both of whom had originally favoured the proposal, now also reversed their opinions and supported the Air Ministry's latest suggestion that, instead, six comparatively junior officers and some airmen should be posted from Australia to serve in the R.A.F. Central Records Office and reception camp. About nine weeks later the base plan was abandoned and a number of junior officers were sent to serve with the R.A.F. staff at the main reception camp in England.

In December 1940 Mr Bruce took part in discussions in London between representatives of the British, Australian and New Zealand Governments, arranged in keeping with *Article XV* of the four-party E.A.T.S. agreement. The British Government's views as put to the conference by the Parliamentary Under-Secretary for Air, Captain Balfour, were that the air effort of each Dominion should be recognised by squadrons of its own air force in the field. Dominion squadrons might be formed with aircrews as they became available, allowing for wastage in aircrew strength under war conditions. Alternatively an assessment of the manpower effort contributed by each Dominion might be used as a basis for calculating the strength in squadrons which that manpower would maintain in the field in war conditions. The first method, Balfour said, would give a preponderance of Dominion squadrons with Dominion aircrews but with R.A.F. ground staff. The second method appeared to be the more satisfactory for account had to be taken of the rear organisation needed to maintain squadrons in the field. On this basis Australia would be entitled

[6] Air Cmdre H. F. De La Rue, CBE, DFC. (1915-18: RNAS and comd 223 Sqn RAF.) Comd RAAF Stn Richmond 1937-40; AOC Western Area 1940-42; Inspr RAAF Admin 1942-46. Regular air force offr; of Kew, Vic; b. Auburn, NSW, 13 Mar 1891.

[8] AVM F. H. McNamara, VC, CB, CBE. (1st AIF: 1 Sqn AFC 1916-18.) RAAF Liaison Offr, London, 1938-41; DAOC Overseas HQ RAAF 1941-42; AOC RAF Aden 1942-45. Regular air force offr; b. Rushworth, Vic, 4 Apr 1894.

to "some 18" squadrons and New Zealand to 6, beyond those complete Dominion squadrons already serving in the theatres of war. Questioned by Bruce, Balfour said that Canada would have 25 squadrons. Surplus Dominion graduates beyond the needs of Dominion squadrons would be posted to R.A.F. squadrons.

Bruce told the conference that the British Government's proposals appeared generous and that he felt they would be acceptable to Australia. The progressive formation of R.A.A.F. squadrons under this plan was to be: by March 1941—2; July 1941—6; September 1941—9; December 1941—12; March 1942—15; May 1942—18. When practicable senior R.A.F. officers and R.A.F. ground staff in these squadrons should be replaced by Australians and, should the Australian Government desire, the R.A.A.F. might send to Britain a high-ranking officer who would be given access to the Chief of the Air Staff R.A.F. and to all group and command headquarters, with power to review all matters affecting the employment of Australian airmen except those matters already under the authority of the Australian High Commissioner. The War Cabinet on 16th January 1941 cabled its approval of the plan to the British Government. Despite this promptness the argument had not ended; the new memorandum of agreement was not formally signed until three months later.

When the Air Board reviewed this agreement and considered its implications, Air Marshal Williams, in his capacity as Air Member for Organisation and Equipment, emphasised the prospect of Australia having approximately 28,000 members of its air force serving overseas by mid-1943. He urged that the Air Board should consider closely the form of organisation the R.A.A.F. required for this responsibility. He held that with the building up of E.A.T.S. squadrons and of the administrative control of the R.A.A.F. the time should soon come when, through its own administrative organisation overseas, it could arrange exchanges between R.A.A.F. officers serving overseas (up to and including those commanding squadrons) more satisfactorily and economically on its own authority than through R.A.F. channels. One mistake of the 1914-18 War should be avoided—officers and airmen should not be sent overseas without any indication or hope of returning to their own country until the war was over. Exchange with a R.A.F. officer had the effect of sending a R.A.A.F. officer overseas and leaving him there, thus preventing R.A.A.F. officers with war experience from returning to instruct their "younger brothers". Proper organisation and a sound system of exchange within the R.A.A.F. would do away with this depressing condition and its unsatisfactory human results. At the same time it would enable members of the permanent force at home and those carrying the burden of training, to gain overseas experience.

Williams therefore strongly advocated establishment of a R.A.A.F. administrative organisation overseas. Free movement between permanent and E.A.T.S. squadrons of the R.A.A.F. serving overseas and squadrons



(*R.A.A.F.*)

The Air Board, July 1940. Left to right: Mr C. V. Kellway (Finance Member); Mr R. Lawson (Director-General of Supply and Production); Air Vice-Marshal H. N. Wrigley (Air Member for Personnel); Air Chief Marshal Sir Charles Burnett (Chief of the Air Staff); Mr F. J. Mulrooney (Secretary); Air Marshal R. Williams (Air Member for Organisation and Equipment); Mr W. Sydney Jones (Business Member); Mr M. C. Langslow (Secretary, Department of Air).



(*R.A.A.F.*)

Aircraft of Far East Command in December 1941. The Beauforts shown in the top photograph had just arrived in Malaya from Australia. Much was expected of them but they were found to be unarmed and all but one were returned to Australia. Below are shown Buffalo fighters and Blenheim bombers. Both were outclassed by their Japanese counterparts, the Zero fighters and the Mitsubishi-type bombers.

in Australia was most desirable. Existing differences in rates of pay and difficulties in accounting had prompted the suggestion that Australian permanent and E.A.T.S. squadrons should be kept apart and that officers in the permanent squadrons must be exchanged only with R.A.F. officers if they were to command E.A.T.S. squadrons. The R.A.A.F. should pay all Australian officers and airmen on its own pay-book system and so eliminate the existing difficulties of pay rates and accounting methods.

The policy of the Government on this issue was again reviewed by the War Cabinet on 9th May 1941 when considering the draft of a cablegram to Bruce. In this, contrary to the opinion expressed by Menzies to Bruce in March 1940, it was held that Australian squadrons should be known as R.A.A.F. squadrons. Further, the R.A.F. had undertaken that the 18 Australian E.A.T.S. squadrons would be manned by Australians when they were available. It was assumed therefore, that, in addition to Australians within the R.A.F., such permanent R.A.A.F. officers of senior rank as might be offered would also be accepted for these squadrons on attachment, exchange or loan.

The question of establishing an Australian headquarters overseas was also revived at this meeting. The War Cabinet considered that, since surrender of R.A.A.F. members to the R.A.F. for general operations and control did not relieve the R.A.A.F. of responsibility for the individual and general welfare of its members overseas, it was necessary to create an Australian organisation in proximity to the Air Ministry. The War Cabinet proposed therefore to establish a small R.A.A.F. headquarters in Britain under the command of a senior Australian officer. But Bruce, meanwhile, had expressed his own emphatic opinion on the subject in a cablegram which was received by the War Cabinet while their own cablegram to him was still in draft form. Bruce had returned to the same conclusion. He now held that all duties, whether relating to the E.A.T.S. or to air liaison, should be unified under the control of a senior Australian air officer in Britain. Broadly, he said, the need was to ensure the best possible advice to the High Commissioner, the closest and most intimate contact with the Air Ministry and the R.A.F. Air Staff, and the most efficient organisation to look after the interests of Australian units in Britain and of Australians whether R.A.A.F. or E.A.T.S. One organisation to do this could carry a more senior officer, which was of high importance in making contact with the Air Ministry, the Air Staff and the Ministry of Aircraft Production, and would avoid overlapping and difficulties in the definition of functions. It was essential that this officer should be under his (Bruce's) jurisdiction. He praised McNamara and expressed a desire to retain him if this would not prejudice his career. With these views the War Cabinet agreed in principle. Thus, in six months, the opponents of a R.A.A.F. overseas headquarters, who thought first in terms of economy, had lost heavily to the champions of Australian Service independence overseas, as represented by Williams.

At this same meeting in May the War Cabinet also decided that 1,000 airmen surplus to R.A.A.F. requirements in Australia should be sent overseas to join the R.A.F. as soon as possible to provide the ground staff needed for R.A.A.F. squadrons listed for formation by April-May 1942. Discussion of this question prompted a suggestion that these airmen should be retained in Australia to meet the need for skilled tradesmen for munitions production until their services were actually required for new R.A.A.F. squadrons overseas. This proposal had stemmed from discussion about a week earlier on the practicability of using tradesmen from the R.A.A.F. for munitions work when they were not fully employed in their trade classifications within the Service.[9] The Minister for Air, Mr McEwen, told the War Cabinet that, as between the Air Board and the Air Ministry, it had been arranged that 1,000 ground staff should be provided by Australia for the R.A.F. The Minister was then informed that, since Australia had been so committed, the War Cabinet would give its approval for the dispatch of these ground staff to Britain, but that before any more skilled tradesmen were committed for overseas service the Minister must first obtain the War Cabinet's approval.

In July the High Commissioner in London was given further advice on the question of R.A.A.F. administration overseas. He was told that he would continue to control all inter-governmental matters, matters of policy affecting the R.A.A.F. overseas, financial adjustments, and supply and shipping. Bruce described the plan as "admirable". On 30th August Williams received a memorandum from McEwen informing him that he had been appointed as Air Officer Commanding at the new headquarters. "It is the definite desire of the Government," his instructions read (in part) "that you will always bear in mind that the agreement (E.A.T.S.) provides not only for the manning of certain squadrons completely with R.A.A.F. personnel, but also that, in other cases, R.A.A.F. personnel should be grouped together so far as possible. It is also the desire of the Government that R.A.A.F. personnel shall be under the command of R.A.A.F. officers, warrant and non-commissioned officers, to the fullest possible extent."

The new headquarters were established in London on 1st December—a signpost to the national identity of the R.A.A.F. had been erected overseas. But the signpost so erected was misleading and, as might be expected of any signpost bearing the wrong directions, it pointed out a road to confusion. McEwen's instruction to Williams that he should "always bear in mind" that the agreement provided not only for the manning of certain squadrons completely with R.A.A.F. personnel, but also that "in other cases R.A.A.F. personnel should be grouped together so far as possible", was undoubtedly an expression of Australian desires, but it most certainly was not a part of the signed agreement. The agreement of April 1941

[9] It had been reported to the War Cabinet that men had been enlisted in the RAAF in anticipation of the arrival of aircraft from overseas; the aircraft had still not arrived and might not arrive for some time. Three months later the War Cabinet noted that 135 airmen had been released for munitions work and that a list of a further 116 men who wished to be released for this purpose had been given to the Manpower Committee.

did provide for a review in September of that year and one subject specifically mentioned for this review was consideration of "the position and organisation of Australian aircrews whom, under these agreements, it may not be practicable to absorb into R.A.A.F. squadrons".[1] This review was never made—neither the Australian nor the British Government sought it—but the blame, surely, lay on the Australian side for failure to press for the achievement of their "definite desire". But, having formally stated the demand for recognition to which Australia was fully entitled, the Cabinet, particularly since Fairbairn's death, had shown little inclination to exert any such pressure. This left the Government open to the charge, soon to be laid with some vigour both in the Australian Press and Parliament, that they were willing to submit to the dominance of R.A.F. officers who were said to be "jealous of the Dominions taking a greater share in air force administration".[2] Certainly neither Burnett, nor the senior R.A.F. officers who would lead the expanded Empire air force, had any such "definite desire". Burnett shared the R.A.F. leaders' vision of a big unified air force to which the Dominions would eventually contribute a large proportion of the aircrew, but in which, unless the Dominion air forces looked sharp, virtually all the senior commands would be held by officers of the R.A.F. and there might be no unit larger than a squadron claiming Dominion identity.

Thus to Williams and most other senior R.A.A.F. officers the Government's acceptance of Burnett's determined policy that the Australian air force should be a reservoir for the R.A.F. was completely inimical. Williams and some of his subordinate officers in the regular force had served proudly in the Australian Flying Corps of 1916-18 whose squadrons were all-Australian and between the wars they had helped to build the R.A.A.F.; that force was their lives' achievement. Now that the war had come the R.A.A.F. was commanded by an officer of the R.A.F., and it seemed likely that its main task would be to train recruits for an English-led force in which there would be only token recognition of Australian national sentiment.[3] How different was the situation of the Australian Army! By

[1] The same Memorandum of Agreement also contained a specific provision that would help to ensure RAAF identity overseas; it ruled that all Australian aircrews, whether serving in RAF or RAAF formations, would wear RAAF uniform.

[2] *Herald* (Melbourne), 5 and 7 Jul 1941.

[3] The problem had been debated early in the 1914-18 War when the viewpoint so consistently expressed in later years by Williams was warmly advocated by Colonel Brancker, RFC, who later, as Air Vice-Marshal Sir Sefton Brancker, was to become a member of the British Air Council, then Director of Civil Aviation, and to lose his life in the *R-101* airship disaster in 1930. "Early in the war," Brancker wrote, "we were faced with the problem as to how we could best train and organise the personnel available from our overseas Dominions. I think all of them actually wished to raise squadrons of their own but, of course, they were all almost entirely dependent on England for expert instructors and equipment. Personally I was in favour of meeting their wishes which were quite understandable, but David Henderson [Brig-Gen, later Lieut-General Sir David Henderson, former Director of Military Aeronautics and at that time commanding the RFC in the field] thought otherwise; he was afraid of the complications which he anticipated might arise if we attempted to place two or three squadrons from different Dominions under one command, with their probably wide variations of pay, promotion, discipline and administration. So the policy was laid down that the overseas Dominions should not have their own squadrons, and that all their volunteers for the air should be either commissioned or enlisted in the Royal Flying Corps on exactly the same terms as those from home. This led to confusion; Canada agreed to this system and adhered to it to the end of the war. Australia revolted at once and by some means or other obtained the concurrence of the Cabinet to raise a corps of their own with its own promotion list and

April 1940 it had organised an army corps for overseas service under a commander who had been given wide powers. By August 1941 (when Williams was appointed to the new post in London) the corps had fought as such in two hard campaigns and its first commander had been promoted to a higher post. But no officer of the R.A.A.F., in a war then two years old, had commanded in action, except briefly, anything larger than a squadron.

It was natural that Williams should go to London filled with zeal to achieve the objectives that the Minister had given him and in particular to realise "the desire of the Government that R.A.A.F. personnel shall be under the command of R.A.A.F. officers . . . to the fullest possible extent". It was unlikely, however, that he would achieve much success at that late stage.

Indeed, as the year was closing, only 9 of the 18 proposed Australian E.A.T.S. squadrons had been formed—3 below the agreed number—and of these 4 were not yet ready for operations. And there was, in this period, strong protest both in the Australian Federal Parliament and in the newspapers that the national identity of R.A.A.F. squadrons overseas was not being preserved. Meanwhile Mr Beasley[4] was telling the Advisory War Council that he would press for the abandonment of the system under which it was "impossible for an Australian officer to gain the highest rank", adding that Australians should have the right to fill all the high places in the R.A.A.F. Mr McEwen, who might well have had the ardent plea of Williams in mind, replied that Beasley's immediate objective was identical with the Government's deferred objective. "It is my definite intention," he said, "to arrange that senior R.A.A.F. officers shall have command and operational experience in theatres of war as soon as this can be managed. I cannot, however, agree to leave our vast Home Defence program and even vaster Empire Air Training program in Australia without an adequate number of senior officers."

These words would have had a hollow ring for the 32 officers of the General Duties Branch of the R.A.A.F. who in August held the rank of group captain or above. After nearly two years nobody in their branch above the rank of wing commander was in fact on exchange to the R.A.F.[5]

The delay in the formation of Australian E.A.T.S. squadrons in Britain certainly did not arise from lack of Australian aircrew. Indeed the rate

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special rates of pay. South Africa adopted a middle course and although they had a squadron manned as far as possible by South Africans, the personnel were on our main list for promotion and some officers and men from the R.F.C. were posted to it for duty. As a matter of fact the Australian squadrons proved a great success and did magnificently. So far as my experience went we had no appreciable trouble as a result of their difference in administration, and whatever inconvenience may have been caused to the staffs under whom they worked was amply recompensed by the tremendous *esprit de corps* and efficiency of the squadrons themselves. I always felt a little sorry for the Canadians in not being allowed to organise their own units, but the R.F.C. would have been very much the poorer if it had not been able to absorb the many magnificent men we obtained from across the Atlantic."—Norman Macmillan, *Sefton Brancker* (1935), pp. 99-100.

[4] Rt Hon J. A. Beasley. MHR 1928-46. Asst Min for Industry and External Affairs 1929-31; Min for Supply and Shipping 1941-45, for Defence 1945; Aust High Commissioner in UK 1946-49. B. Werribee, Vic, 9 Nov 1895. Died 2 Sep 1949.

[5] The only officers on exchange were 3 wing commanders, one squadron leader and 3 flight lieutenants.

of enlistment was such that, in contrast with the situation in May 1940 when the War Cabinet feared that no more trained airmen could be sent overseas, the R.A.F. was now asked whether it could undertake the formation of more than the prescribed 18 Australian squadrons. The Air Ministry made the studied answer that after June 1942 an increase of 25 per cent "might be possible", but at the same time indicated Britain's own need by advising a continuation of ground staff training. The chief trouble in forming the Australian squadrons lay in the tremendous strain that was being placed on the R.A.F's capacity for training and arming such units.[6]

On 29th August 1941 Mr Menzies returned his commission as Prime Minister to the Governor-General and was succeeded by Mr Fadden who had been serving as Treasurer. Then, about six weeks later, Mr Fadden himself resigned and Mr Curtin, as the new Prime Minister, led a Labour Ministry to the Treasury benches. So far as the air force was concerned there was special interest in this dramatic wartime transfer of control to the party which, for so long, had pledged itself to a defence policy in which the R.A.A.F. was the declared keystone.

The new Minister for Air and Civil Aviation, Mr Drakeford, could scarcely have taken over his portfolios at a more difficult time. For the British Commonwealth as a whole the war situation was extremely grave, and for Australia in particular the rapid fading of hopes that Japan might be restrained from becoming an aggressor in the Pacific was causing acute tension.

Mr Drakeford had graduated into politics with a lively industrial background. Long experience as a railwayman in Victoria, culminating in promotion to the locomotive footplate as a driver—a calling which he had in common with the new Federal Treasurer, Mr Chifley—led to his election first as Federal Secretary and later as Federal President of the Australian Federated Union of Locomotive Enginemen. This last office he retained after he became a Minister. Friendly and earnest, he immediately displayed intense keenness to understand the problems with which his Ministerial duties confronted him. From the outset, too, he showed a keen sympathy with the men of the air force. Inevitably, and particularly in the early days of office, he had to lean heavily for guidance on the senior departmental and Service officers. In Mr Langslow, the department's permanent head, he had an adviser who, although often extremely unpopular with serving officers intolerant of departmental ways and means, had an intimate knowledge not only of the detail of R.A.A.F. administration but of the Australian political scene, and therefore of the new Minister's part in it. With Air Chief Marshal Burnett the relationship was different in the extreme. Here the former locomotive driver, ardent industrial advocate and alert Australian Labour politician was placed side by side with the regular Imperial service officer, a man trained to be con-

[6] The EATS Memorandum of Agreement dated 17th April 1941 declared: "The rate of formation cannot be guaranteed since it is dependent on the rate at which the projected air force expansion can be achieved. . . ."

servative in thought and action, at least so far as political administration concerned him. But this was war, the cause was common and tremendously urgent, and so the new Minister, the astute departmental secretary and the autocratic Chief of the Air Staff went to work together while many observers wondered about the outcome of the strangely assorted partnership.

CHAPTER 6

SEA LANE PROTECTION AND AIRCRAFT PRODUCTION

ITALY'S declaration of war against the British Commonwealth and France on 10th June 1940, and the submission of France to the Axis Powers on the 22nd, had had an immediate impact on Australian aviation both Service and civil. The additional naval challenge in the Mediterranean and military challenge in North and East Africa increased the difficulty in obtaining oversea supplies, notably aircraft, and this in turn placed a check on expansion of the R.A.A.F's capacity for trade protection and handicapped air communications between Australia and Britain.

One political reaction to this critical situation was noted when a special Commonwealth conference of the Australian Labour Party held in Melbourne on 18th and 19th June passed by 24 votes to 12 a resolution pledging "complete participation in the Empire Air Force Scheme". The resolution was described by its mover, Mr W. Forgan Smith, Premier of Queensland, as designed to give "a political charter to the Federal Parliamentary Labour Party and the Labour movement as to how a part should be played in the present crisis". A day later Mr Curtin, in the Federal Parliament, welcomed an announcement by the Prime Minister that volunteers for the defence of Australia would not be turned away, adding: "I ask once more, whatever be the explanation for the delays in the past, that the Government concentrate to the greatest degree upon strengthening the R.A.A.F." He referred, too, to the nation's obligation to make its own aircraft, declaring: "Let the Government get busy on this work, we may not have much time to spare."

Much of the limited operational strength of the home force of the R.A.A.F. was fully extended by this time with trade protection in the shipping lanes around the Australian coast. The prospects of increasing that strength had been reduced when, on 28th May, the War Cabinet, recognising the urgency of Britain's need, had released Hudson aircraft that were on order for Australia and offered a squadron of Hudsons for service at Singapore. On 13th June the War Cabinet was once more striving to find further ways in which to help. The three Chiefs of Staff made their contributions to this discussion and Burnett, for the air force, proposed that an additional Hudson squadron and a Wirraway squadron should replace R.A.F. units in India or the Far East, preferably at Singapore. After awaiting a further appreciation of the situation from the British Chiefs of Staff before making a definite decision, the War Cabinet, 12 days later, decided to send the two additional R.A.A.F. squadrons to Singapore.

Thus within about eight months after the Government had cancelled its previous decision to send a six-squadron force overseas, it had in

fact sent five squadrons overseas. If the original plan had been adhered to the expeditionary air force would have included a force headquarters and three wing headquarters, whereas the five squadrons were trickled more or less piecemeal into R.A.F. formations, though it will be seen that a station headquarters eventually accompanied the three squadrons to Malaya.

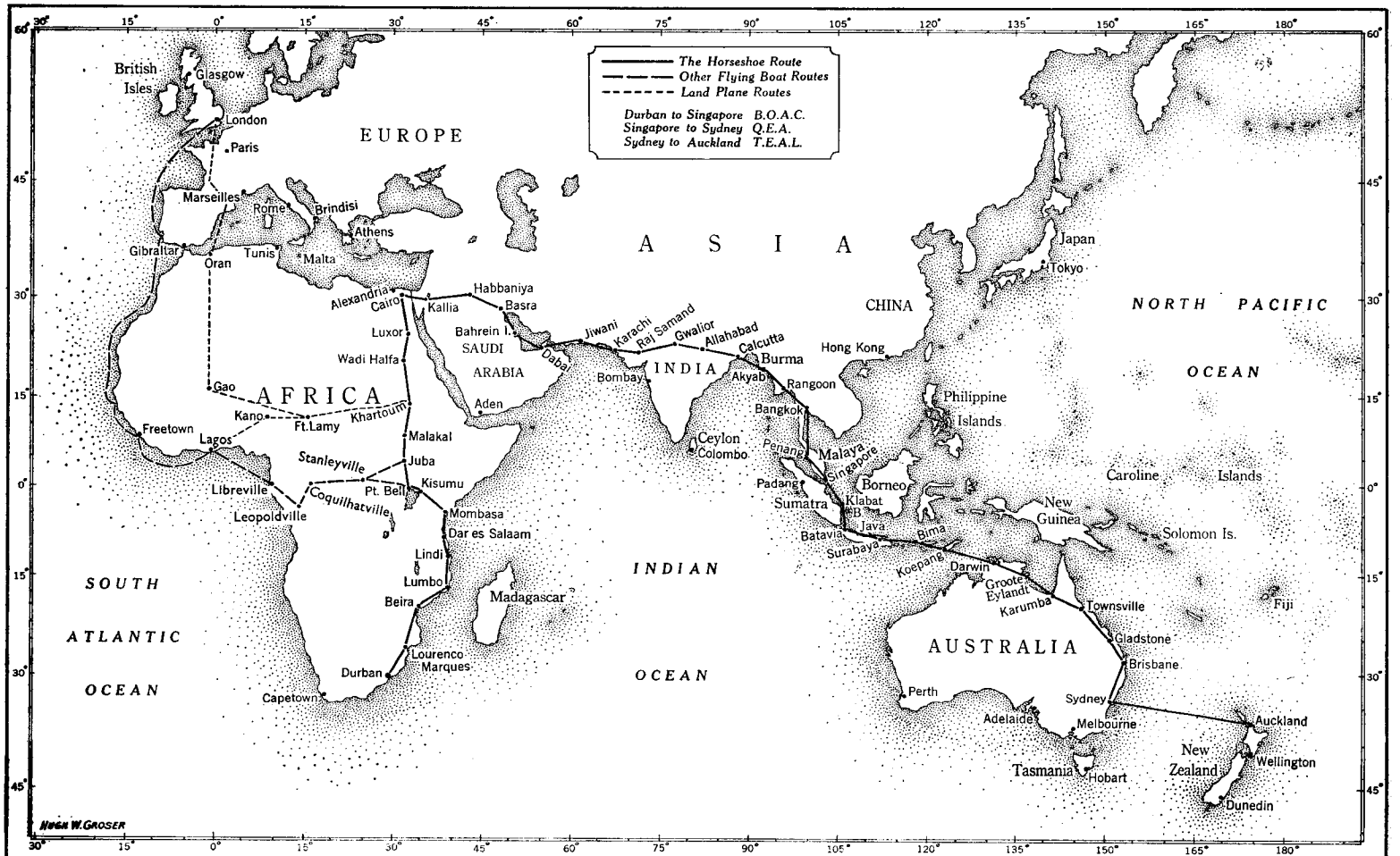
An immediate effect of the Italian aggression and the French capitulation was the interruption of the civil air services operating over the direct route between Britain and Australia. Plans to meet such a situation had been prepared in advance and the "Horseshoe" service was promptly put into operation. This linked Durban on the west with Sydney on the east. From Durban the course was north to Cairo, east-north-east to Habbaniya in Iraq, thence down the Persian Gulf and across northern India, along the Burma coast and Malayan Peninsula to Singapore and then through Batavia, Surabaya, Koepang and Darwin to Sydney and Auckland. Just before Italy declared war construction of an engine overhaul shop for Qantas Empire Airways was begun at Mascot, Sydney. Thirty-nine days later, in time for the opening of the Horseshoe service, it was in operation. Similar speed was demonstrated at the Durban end in erecting and staffing maintenance facilities. A weekly schedule was begun on 19th June and the service became twice-weekly in August. To link the top of the Horseshoe arc to Britain was not simple. The route between Britain and Cairo which the new Axis partnership had cut was replaced by a trans-Sahara route—south from Britain to Oran and then a grim 2,000 miles' desert flight to Fort Lamy, with refuelling at a tiny airfield at Gao and thence through to the Sudan and Egypt. But on 28th June flight across French colonial territory was banned and Britain was cut off entirely from the Empire air routes. But the Horseshoe route was maintained in full operation, the long stretch from Durban to Singapore being flown by aircraft of the British Overseas Airways Corporation and that from Singapore to Sydney by aircraft of Qantas Empire Airways. The lateral extension to New Zealand was operated by Tasman Empire Airways, which had been established early in 1940 by the New Zealand, Australian and British Governments in partnership, and the first regular flight on which had been made on 30th April.[1]

Late in 1940 the War Cabinet received an offer from Captain Taylor,[2] associate of the late Sir Charles Kingsford-Smith in his pioneering Pacific and Tasman Sea flights, and a notable air pilot and navigator, to undertake an air survey of a new Pacific route.[3] Air Chief Marshal Burnett, who was present at the meeting, suggested that Taylor should offer his services to Qantas Empire Airways who were preparing to ferry Catalina

[1] For a detailed account of British Commonwealth civil aviation 1939-44 see Air Ministry publication, *Merchant Airmen* (1946); for specifically Australian operations see E. Bennett-Bremner, *Front-line Airline* (1944).

[2] Sir Gordon Taylor, GC, MC. (1914-18: 66, 94 and 88 Sqns RAF.) Served with RAF Transport Cd. Air pilot and navigator; of Sydney; b. Mosman, NSW, 20 Oct 1896.

[3] The route was to be via Suva, Cook Island, the Marquesas and Clipperton to Honduras. This could be linked with Canada by way of the Bahamas.



The Horseshoe Route

flying-boats from the United States to Australia. Alternatively he would be willing to offer Taylor an appointment in the R.A.A.F.

In September the Department of Civil Aviation had approached Qantas Empire Airways with the request that the company should organise a ferrying service across the Pacific. Eighteen Catalinas had been ordered for the R.A.A.F. and their delivery had very high priority. Qantas had sufficient trained pilots for such a program of long-range flying. There was a diplomatic aspect to the undertaking, too, for the United States was not at war and delivery would be simplified if it was undertaken by a civil organisation. A condition of purchase was that the aircraft should be flown under United States command to Honolulu where they would become Australian property. The company agreed to the ferrying proposal and early in December Mr D. H. Wright, a senior Qantas engineer, went to the factory of the Consolidated Aircraft Corporation, manufacturers of the Catalina, at San Diego, to arrange maintenance and other delivery details. Already a small Australian party was in San Diego, headed by G. U. ("Scotty") Allan,[4] a former Qantas captain who was accompanied by two technical non-commissioned officers, Warrant Officers Richmond[5] and Bemrose.[6] Allan, having been very recently commissioned, held only the probationary rank of pilot officer, but his temporary lack of seniority was not obvious, for at least the letter of the American neutrality law was being strictly observed and he and his Service companions were in civilian clothes. At the end of the month Captain Brain, Qantas' operations manager, accompanied by Taylor, who had accepted Burnett's suggestion and whose services were particularly welcome not only because of his exceptional experience in trans-Pacific aerial navigation, but because of his knowledge of the Catalina flying-boat,[7] flew by Pan American clipper to Los Angeles and then went to San Diego to initiate the ferrying program. On their flight to the United States they surveyed bases for the route over which the Catalinas would be ferried. On 25th January 1941, Brain, Taylor, Allan, and their party, took off on the first ferry flight to Sydney. Another Qantas pilot, Captain Denny,[8] joined the aircraft at Honolulu. The flight, which was made by way of Canton Island and Noumea in 60 hours, 16 minutes flying time (seven days elapsed time), was only the third direct trans-Pacific flight to Australia in history.[9]

[4] W Cdr G. U. Allan, CBE, AFC, 261374. (1918-19: 71 Sqn RFC and 11, 47, 58 Sqns RAF.) 23 Sqn and SPTF 1941-42; Trans Pacific Air Ferry Service and comd FBRD 1943; comd 1 FBRD 1943-44. Commercial pilot; of Sydney; b. Forgandenny, Scotland, 2 Feb 1900. (Allan had been co-pilot of the aircraft *Faith in Australia* on the first official airmail flight to New Guinea in April 1934.)

[5] W Cdr W. D. Richmond, OBE, 2984. 10 Sqn 1940-41; liaison and ferrying duties, RAAF Fwd Echelon, AAF, SWPA 1942-45. Regular airman; of Kew, Vic; b. Ballarat, Vic, 15 Nov 1906.

[6] F-Lt G. S. Bemrose, 3715. 10 Sqn; Northern and Western Areas HQ; Instructor, Seaplane Training Flight, Rathmines, 1941; comd 1 TAF WT Stn, Morotai, 1945. RAN telegraphist later regular airman; of Cottesloe, WA; b. Croft, Lincolnshire, Eng, 20 Dec 1904.

[7] Taylor made a survey of the Indian Ocean route from Australia to Mombasa, Kenya, in 1939, flying the Catalina "Guba" of the Richard Archbold Expedition.

[8] Sqn Ldr O. D. Denny, 1396. RAAF Reserve and Qantas Merchant Air Service 1939-45. Commercial pilot and former regular airman; of Roseville, NSW; b. Northcote, Vic, 13 May 1899.

[9] Final delivery of the eighteen Catalinas was made on 23rd October 1941. In completing the ferrying program practically every senior Qantas captain and first officer took some part as did seven RAAF officers and six technical non-commissioned officers with the added assistance of F. W. Stevens, a former Qantas first officer then serving with the Department of Civil Aviation, who acted as a radio officer. Bennett-Bremner, pp. 19-28.

Increasing emphasis was now being placed on the importance of Darwin, a port which, despite the recent development of international civil aviation, was still very much Australia's "back door". In 1938 Jones, then a wing commander, had inspected the area and reported on it in terms of air defence but little or nothing had been done beyond preliminary planning. When Germany declared war the nucleus of No. 12 Squadron had settled in at its new base on the Darwin civil aerodrome with Wing Commander Eaton,[1] who had accompanied Jones on his visit of inspection, as its commanding officer. But by June 1940 Darwin was receiving more attention. No. 12 Squadron was partly "cannibalised" to provide two flights of Ansons from which No. 13 Squadron was formed and a station headquarters was established. A third flight, which had received Wirraways, remained to form the basis for the reorganised No. 12 Squadron as a general purpose unit, the command of which went to Squadron Leader Glasscock[2] while Eaton became station commander. Later in the same month No. 13 was re-equipped with Hudsons, which greatly increased its value, and Squadron Leader Balmer[3] was given command. At the end of this month there were 30 officers and 212 airmen on the R.A.A.F. strength at Darwin. By 27th July the station headquarters and the two squadrons had received 182 reinforcements between them. By this time, too, the need for ancillary services had become apparent and the erection of a replenishing centre at Katherine, 212 miles south-east from Darwin, was begun to provide accommodation for men, munitions, fuel and stores. In August the station headquarters were moved to an exclusively R.A.A.F. aerodrome at Darwin where No. 13 Squadron was also based, while No. 12 Squadron remained at the civil aerodrome. Both squadrons were working hard, chiefly on shipping escort, seaward reconnaissance and coast-wise patrols, which included keeping a watch on the Japanese pearling luggers, significantly still based in Australian or adjacent waters. Staging bases had been established at Drysdale and Port Hedland to the west and at Millingimbi to the east. Though sparsely manned these bases permitted an extension of the coastal patrols. Flying hours mounted and the servicing of aircraft presented difficulties; all aircraft requiring overhaul after 240 hours' flying had to be sent to Richmond, New South Wales, and thus remained off squadron strength for periods of up to three weeks.

By October 1940 the Air Board was reviewing active service plans and Burnett inspected the area. The establishment of a satellite base at Batchelor, 50 miles south from Darwin, was a major proposal. An exercise to test the planning was held in December, aircraft moving from Laverton

[1] Gp Capt C. Eaton, OBE, AFC, 24. (1918-19: RAF.) Comd RAAF Stn Darwin 1940-41, 2 SFTS 1941-42, RAAF Stn Ascot Vale 1942-43, 72 Wing 1943, 79 Wing HQ SWPA 1943-44; AOC Southern Area 1945; Aust Consul, Dili, Portuguese Timor 1946-47; Acting Consul-General Indonesia 1947-49. Regular air force offr; of South Yarra, Vic; b. London, 12 Dec 1895.

[2] W Cdr C. P. Glasscock, DFC, 260092. Comd 12 Sqn 1940, Paratroop Training Unit 1942-43, 30 Sqn 1943. Agrostologist; of Penrith, NSW; b. Goulburn, NSW, 3 Feb 1912. Killed in action 19 Sep 1943.

[3] Gp Capt J. R. Balmer, OBE, DFC, 68. Comd 13 Sqn 1940-41, 7 and 100 Sqns 1942, 467 Sqn 1943-44. Regular air force offr; of Maldon, Vic; b. Bendigo, Vic, 3 July 1910. Killed in action 12 May 1944.

to Darwin by way of Alice Springs and from Pearce to Darwin by way of the west coast. To make the exercise reciprocal and to avoid leaving the south-western and Bass Strait areas depleted, No. 13 Squadron moved from Darwin to Pearce and aircraft were sent from Richmond to Laverton.

In November 1940 the situation in the Pacific was regarded so seriously that the War Cabinet approved plans for the evacuation of civilians from Darwin. Movement by air was to be regarded only as a possible auxiliary to movement by road.[4] The Government, on the advice of the Chiefs of Staff, would be responsible for declaring that evacuation should be undertaken, but in extreme emergency the decision would be made by the Darwin Defence Coordination Committee. Consciousness of the probability of war with Japan also prompted some measure of preparation for ground defence—slit trenches were dug and air raid and anti-gas drills were introduced—but, mainly because equipment was lacking, there was little aerodrome defence organisation and training, and, as reinforcements arrived, there were insufficient rifles for them.[5]

By April 1941 all units were based at the R.A.A.F. aerodrome, with a total strength of 60 officers and 634 airmen; by May advanced operational bases had been established at Port Hedland, Broome, Derby, Drysdale River Mission, Wyndham, Bathurst Island, Millingimbi and Groote Eylandt. Batchelor was given preference over Katherine as the base subsidiary to Darwin. In May also control of all units in the area passed to Northern Area Headquarters at Townsville. By December 1941 37 operational bases had been established on the Australian mainland—8 in Queensland, 5 in New South Wales, 4 in Victoria, 5 in South Australia, 10 in Western Australia, 3 in the Northern Territory and one each on Flinders and King Islands in Bass Strait.

Australia in collaboration with the New Zealand Government had initiated steps in 1939 for the formation of a line of advanced operational bases in the Pacific islands as an outer defence ring. From this time surveys for suitable sites and the development of bases were undertaken. The object was to form a chain extending through the islands north of Darwin, New Guinea, Admiralty Islands, Bismarck Archipelago, Solomon and Santa Cruz Islands, New Hebrides and New Caledonia.[6] Facilities at the bases were to include flying-boat moorings, landplane and W-T facilities, and bomb and fuel supplies. Port Moresby was to be the main rearward operational base in the chain.

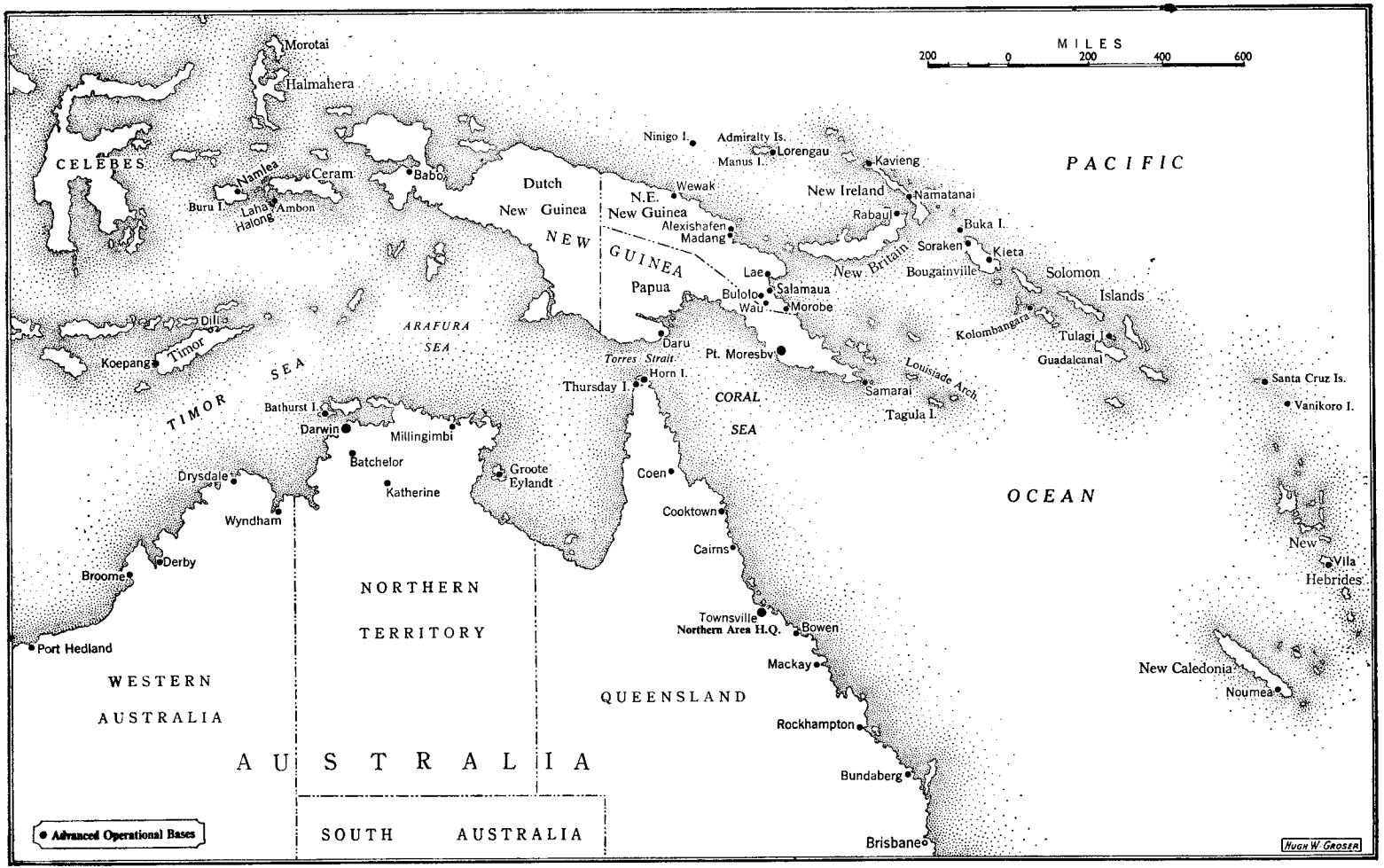
Towards the end of 1941 some progress had been made with the development of these operational bases and facilities had been provided for the normal operation of flying-boats from Rabaul, Tulagi, Vila and

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[4] In August 1940 the War Cabinet approved expenditure of £200,000 for the reconstruction of the Alice Springs-Birdum road.

[5] A warrant officer stationed at Darwin from June 1940 to November 1941 recorded later that he could recall only two rifle practices in the whole of that period.

[6] It is interesting to recall the advocacy 23 years earlier by W Cdr Maguire, of a comparable string of advanced island bases, and that, at a defence conference held at Wellington, NZ, in April 1939, Australia accepted responsibility for air reconnaissance and action in New Guinea, the Solomon Islands and the New Hebrides.



Development of Advanced Operational Bases, November 1939-December 1941

Noumea, while moorings were laid down for flying-boats at some Timor bases, and at Samarai, Lorengau and Vanikoro. Facilities for amphibious type aircraft (Seagulls) were established at Daru, Cooktown and Thursday Island. Since the number of land-based aircraft was very limited, aerodrome development was restricted to defended bases from which it was proposed to strike. Thus Port Moresby and Rabaul were extensively developed, while Lae, Kavieng and Buka were given only an emergency base status.[7]

In Papua progress was being made with the Port Moresby base where the main new aerodrome known as the "Seven Mile" had been constructed with a good surface and ample width though its length, 3,600 feet, was not adequate for modern heavy bombers, as the pilot of an American Liberator (B-24) which landed there on 21st October carrying a Lend-Lease mission to Moscow noted. The length, he said, should be at least 5,000 feet. The operational base at Port Moresby also lacked adequate facilities for night operations and night flying training. Most operational aircraft therefore took off at dawn and landed before dusk.

In the Mandated Territory of New Guinea aerodrome development had been approached with caution because the terms of the Mandate forbade construction of "fortifications". Lae and Salamaua, which were used extensively by civil aircraft, had both landplane and seaplane bases, as had Wewak. They were almost completely unguarded and unobstructed. Other air operational bases were established at Wau, Bulolo and Alexishafen.

Most of the coastwise and seaward operations undertaken by the R.A.A.F. in the first two years of war were concerned with guarding the shipping lanes. From the very earliest days of the war R.A.A.F. reconnaissance squadrons were kept on the alert by reports of sightings of possible enemy submarines and sea raiders. False alarms were inevitable. One such was a report of what was believed to be a submarine surfacing in Broken Bay, 20 miles north of Sydney. An air sweep 70 miles to seaward and diligent naval searches provided no result. At this stage submarine attacks on shipping in the Australian sea lanes were not probable;[8] attacks by enemy surface raiders were much more likely.

A "strange warship" reported only 10 miles off Gabo Island on 10th October 1939 was responsible for another arduous and negative search. When in mid-November a British tanker, the *Africa Shell,* was reported to have been sunk off the coast of Portuguese East Africa there was considerable speculation on the possibility of the raider responsible crossing the Indian Ocean and attempting a meeting with one of the German ships

[7] In December 1941 the motor vessel *Wanaka* (2,559 tons) was chartered by the R.A.A.F. to carry men and supplies to advanced operational bases, a task she performed for the remainder of the war.

[8] In January 1941 the Minister for Air (Mr McEwen) told the War Cabinet that though aircraft flying over Australian waters had reported eight separate submarine sightings since 13th December 1940, the presence of enemy submarines in the localities named in these reports had been doubted by the naval authorities. The Chief of Naval Staff (Admiral Colvin) replied that the reports mentioned by the Minister were not as numerous as those received by the navy from other sources. All such reports were investigated and none was regarded lightly.

that had taken refuge at Padang on the west coast of Sumatra. In consequence R.A.A.F. aircraft were ordered to patrol over the Timor Sea, a task which provided No. 12 Squadron with its first major operational duties from Darwin; aircraft from No. 14 Squadron based at Pearce also undertook extended reconnaissance.

Departure of the first echelon of the A.I.F. and the N.Z.E.F. for the Middle East gave R.A.A.F. patrols a variation on the same theme. For 10 days, from 10th January 1940, when the convoy left Sydney Harbour, until it passed beyond aircraft range of Fremantle, these crews aided the naval escort in tending the formation of eleven great ships carrying 13,000 men. From that time on all troop convoys were given similar cover.

Reports received in Australia on 12th March that German ships known to be sheltering in Netherlands East Indies ports might attempt concerted departure called for increased naval and air force vigilance in adjacent waters. Again, without incident, aircraft patrolled between Darwin and Timor. As the days passed the demand for reconnaissance work increased so much that a general reconnaissance school was formed at Point Cook on 29th April. When this school was fully established its crews were given occasional coastal patrols, partly as exercises but also to relieve the overtaxed operational squadrons from some of the less responsible but still essential duties.

An operation that held promise of a share in taking an enemy vessel as prize was ordered in June. Italy's entry into the war seemed practically certain and the Italian liner *Romolo,* then in Australian waters, was being closely watched. *Romolo* left Brisbane on 5th June carrying a Torres Strait pilot. The armed merchant cruiser *Manoora* overtook and shadowed her until midday on 9th June when, with Italy's intentions still doubtful, the Naval Board ordered *Manoora's* captain to take off the pilot and allow *Romolo* to proceed unaccompanied. But by the evening of the same day, when there was no longer any doubt that Italy would go to war, the shadowing instructions were renewed, the two ships by this time being about 160 miles apart. No. 11 Squadron, based on Port Moresby, was given orders to take part in the search. Only one of the squadron's two Empire flying-boats was available (the other was undergoing overhaul at the Rose Bay base at Sydney) and its searching capacity was restricted by the doubtful condition of its oil tanks and the limit set by the lack both of refuelling facilities and of aviation fuel itself at suitable outlying island bases.

Early on the next day, with Italy at war as expected, the squadron received its operational instructions and the flying-boat, commanded by Flight Lieutenant Sims,[9] took off for Tulagi while one of the Seagulls took off for Rabaul but was forced by stormy weather to return. Stopping in the Louisiade Archipelago to refill its oil tanks the flying-boat flew

[9] Sqn Ldr E. C. Sims, 260158. 11 and 20 Sqns; Qantas Merchant Air Service 1941-45. Commercial pilot; of Sydney; b. Kalgoorlie, WA, 30 Nov 1907.

against strong headwinds and in weather too thick to make searching practicable. At Tulagi, where the fuel was brought out by boats in 44-gallon drums and 4-gallon tins, it was found that an auxiliary oil tank was cracked which prevented the flying-boat from remaining airborne for longer than about 5 hours and a half. Searches were made to the north and east of Tulagi on 11th June in the course of which the aircraft sighted and communicated with *Manoora* but there was no sign of *Romolo*. By this time the flying-boat had taken in all the aviation fuel Tulagi could provide, and when Sims was ordered to fly to Gizo, westward of Kolombangara Island, he was obliged to blend motor spirit with the aviation fuel in some of his tanks—using this mixture only after having gained an altitude of 5,000 feet. Unable to complete the whole of the prescribed search, in which he was further hampered by a misinterpretation at Port Moresby of the operational instructions from Melbourne—an error which was not corrected until too late for effective action[1]—Sims failed to intercept the Italian ship which, on 12th June, was again overtaken by the *Manoora* in a position to the north-east of the Solomon Islands, but by this time the *Romolo* had been abandoned by her company after they had set her on fire.

On the day *Romolo* was abandoned a second Seagull from No. 11 Squadron, piloted by Flying Officer Hampshire,[2] made an unsuccessful search between Woodlark Island and Buka Passage.

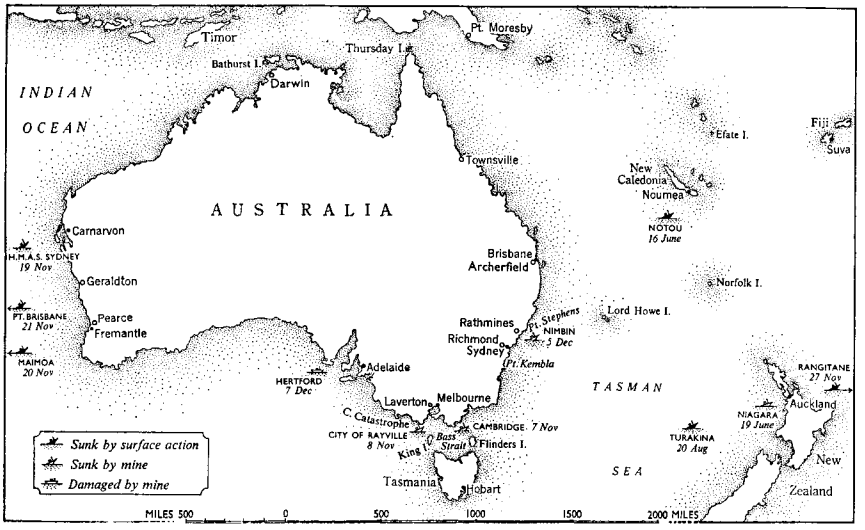
Although the failure of the oil system of Sims' aircraft shortened a reconnaissance which should have intercepted *Romolo,* the Chief of the Naval Staff subsequently reported that the operation had in fact assisted considerably by covering a large part of the search area.

Reports from the Naval Board that an enemy minelayer was operating off the New Zealand coast prompted special search operations in Australian waters, notably the entrance to Bass Strait. Grim proof of the accuracy of these reports came with the news of the sinking of the passenger liner *Niagara* shortly before 3 a.m. on the 19th June—the first ship mined in the Pacific since war began. The crews of all ships and aircraft in the area were keenly on the alert, but the minelayer evaded detection. From 20th August the responsibilities of the reconnaissance squadrons increased. On that date a signal from the steamer *Turakina* reported that she was being attacked by an enemy raider approximately 800 miles east-south-east from Sydney and 360 miles from Auckland. Flying-boats from No. 11 Squadron were ordered to deploy in the hope that if the raider turned northwards she might be intercepted, and the reconnaissance force in Bass Strait was temporarily strengthened. The considerable movement

[1] In eastern Australia at this time joint naval, military and air operations were controlled from South-Eastern Area Combined Headquarters at Melbourne and from North-Eastern Area Combined Headquarters at Port Moresby. Orders for the search originated at Melbourne where the Chiefs of Staff exercised joint authority over the Central War Room, but communications between Melbourne and Port Moresby were slow and several hours elapsed between the dispatch and receipt of signals.

[2] W Cdr J. MacL. Hampshire, DFC, 256. 11 and 33 Sqns; comd 41 Sqn 1942-43, 461 Sqn 1944; HQ Coastal Cd RAF 1944-45. Regular air force offr; of Cottesloe, WA; b. Port Macquarie, NSW, 27 Feb 1916.

of troopships in Australian waters at this time intensified the anxiety, and for a week aircraft from Richmond, Laverton and Archerfield searched to seaward to a depth of 300 miles along the east and south-east coasts but without result. Meanwhile a search was undertaken for the French ship *Notou* which was reported more than a week overdue at Noumea. The Sydney-Noumea line was searched for 300 miles from the Australian coast again without result. Relations with the French administration in New Caledonia were so touchy at this time that permission to use Noumea as a flying-boat base and thus extend the area of search was refused.



Attacks and sinkings by enemy surface raiders and mines, June-December 1940

Yet less than a month later the position had improved sufficiently for Mr B. C. Ballard, the Australian Official Representative at Noumea, to request that R.A.A.F. aircraft should fly over French ships steaming between New Caledonia and the Australian coast to improve the morale of the native crews; the *Notou* had been sunk on 16th August.

In November a newspaper report attributed to the Minister for Air, Mr McEwen, a statement that the aircraft available were inadequate to maintain continuous patrols over the shipping lanes. This led the Waterside Workers' Federation to protest to Mr Beasley, who brought the matter before the Advisory War Council. At this meeting Air Commodore Bostock outlined the measures taken by the R.A.A.F. in cooperation with the R.A.N. in defence against enemy raiders. McEwen, on 21st November, answered the waterside workers' protest in the House of Representatives, saying that one newspaper in reporting him had misinterpreted his statement by condensation and paraphrasing. He had made the point that mine-

laying would most certainly be done at night. Daylight patrols were necessary not merely over the actual trade routes but over an area of ocean from 150 to 200 miles to seaward from any coastal trade channel. It was true that Australia lacked sufficient aircraft suitable for continuous reconnaissance over such an area. The R.A.A.F. was making the maximum use of its aircraft which, it was hoped, would soon be supplemented with aircraft on order from the United States and, later, from local manufacture.

Mr Curtin, as leader of the Opposition, took up the debate and questioned how far the air force was equipped to ensure that enemy vessels were not operating in Australian waters. It was clear that there had been too wide a dispersion of the ships of the R.A.N., he said. There was apprehension that an enemy raider had been in the vicinity of the Australian coast before the mines had been discovered. That same day he had questioned the Minister for the Navy (Mr Hughes) about a report on the presumed activities of an enemy vessel off the coast of Western Australia. Better use of the navy should help to make up for the inadequacy of the air force. It was plain that New Zealand and Australia were being singled out for enemy attention.

That this was so was borne out by Allied losses in Australian and adjacent waters. On the night of 7th November the British steamer *Cambridge* had been sunk by a mine six miles east of Wilson's Promontory, one member of the crew being lost. Aircraft from Laverton and Richmond searched without success. On the evening of the next day the American ship *City of Rayville* struck a mine six miles south of Cape Otway and sank, again with the loss of one crew member. Air searches again failed to detect minelayer or mines. On 20th November the steamer *Maimoa* signalled that she was being attacked by a surface vessel approximately 750 miles west from Fremantle. Reports of attacks by surface raiders on the *Port Brisbane* in the Indian Ocean and the *Rangitane* in the Pacific Ocean came late in November, and on 5th December the Australian steamer *Nimbin* struck a mine off Port Stephens, New South Wales. Seven members of her crew were lost and a flying-boat from the R.A.A.F. station at Rathmines found survivors clinging to a raft and directed a rescue ship to them. On 7th December the British steamer *Hertford* was damaged by a mine 40 miles south-west of Cape Catastrophe, off the South Australian coast. From 14th to 17th December aircraft from Richmond, Laverton, Pearce, Darwin, Townsville, and Archerfield engaged in seaward patrols—some of them to a depth of 400 miles—covering an area of 1,020,000 square miles, but still the enemy evaded them.

Army coast defences in New South Wales provided a variation in these disappointing and tedious patrols when, on 17th December, they reported that an unidentified, single-engined, high-wing floatplane had flown over Bondi and Sydney Heads, turned eastward and disappeared. One of five searching aircraft from Richmond later reported having sighted a submarine off the coast, but another aircraft which searched the locality

brought back another "nil" report. Next day 11 Hudson aircraft conducted an intense search from dawn to dusk without result. A safety perimeter patrol was flown round the liner *Queen Mary,* now a troopship, as she lay in Sydney Harbour. At 1.20 p.m. on this day a high-winged monoplane, similar to the one reported on the previous day, was reported heading north over Port Kembla at 15,000 feet. Interception was attempted from Richmond but no enemy aircraft, sea raider or submarine was sighted. The anxiety was such that all large liners serving as troopships, including the *Queen Mary, Queen Elizabeth, Aquitania, Mauretania* and *Ile de France,* were given almost continuous air cover while in port or in Australian coastal waters. As an example of the endurance required in completing the "clearing searches" covering the movements of such troopships there is the record of four Hudson aircraft of No. 2 Squadron, Laverton, which were flown 3,452 miles and actually searched 52,000 square miles of sea in 24 flying hours.[3]

On Christmas Day 1940 the most expressive evidence of the activities of enemy raiders yet obtained came with the news that 496 survivors from 10 merchant vessels[4] had been landed by three enemy ships at Emirau Island, north of New Ireland. A flying-boat from No. 11 Squadron at Port Moresby took off seven ship masters and others who could provide important Intelligence and brought them to Townsville, whence they were taken to Melbourne for interrogation by naval and air force officers. The others were brought to Townsville in the liner *Nellore.* No. 11 Squadron's two Empire flying-boats and three aircraft from No. 24 Squadron were stationed temporarily at Rabaul as a precautionary measure. On 27th December the phosphate works on Nauru Island were shelled by enemy vessels which were still able to use the vast expanse of ocean in which they were operating as "cover" and continue to evade detection.

Lack of success in these air searches was due in some part to the inexperience of the crews and of the air staff directing their operation. This was recognised as an important factor and in 1941 the navigation section at R.A.A.F. Headquarters undertook a complete revision of a basic Service publication "Standing Reconnaissance Instructions". This revision was based on the system adopted by the R.A.F's Coastal Command. But by far the most important reason for the failure of the air searches in this period to detect enemy raiders, minelayers, submarines and such aircraft as these vessels might be able to operate, lay in the simple mathematics of the problem. It was depressingly clear that the vastness of the area in which the enemy operated its few surface vessels computed against the quite inadequate number of suitable aircraft available for the searches showed the odds to be heavily in favour of the enemy.

The appearance of Japanese luggers in north Australian waters from June to November 1941 was regarded by Intelligence officers as particu-

[3] In the first year of war nine reconnaissance squadrons flew more than 1,700,000 statute miles and searched approximately 22,500,000 square miles of coastline and sea.

[4] *Rangitane, Ringwood, Notou, Holmwood, Turakina, Triona, Vinni, Triaster, Komatu and Triadic.*

larly significant since the luggers had been recalled to Japanese waters in the previous August; since then the pearling season had almost ended and trade restrictions imposed on Japan suggested that the pearl shell trade was no longer profitable. Yet, on 4th June, 39 luggers were sighted on the various fishing grounds between Broome and Darwin. On 30th June 30 were reported in Cook's Shoal, 70 miles north-west of Thursday Island, and on 31st July 22 were on grounds to the west of Bathurst Island. A pearling "mother" ship, the *Kokoku Maru,* sought and was granted permission to enter Darwin Harbour on 29th October. The task of keeping watch on these craft fell largely to the air force formations in Northern Area, which made long reconnaissance flights for the purpose.

There was new cause for anxiety about this time because H.M.A.S. *Sydney,* which had been patrolling in the eastern Indian Ocean, was overdue at Fremantle. This anxiety increased until, on 24th November, an extensive air search was ordered. All available Hudsons from Nos. 14 and 25 Squadrons based on Pearce, three Hudsons from Darwin, two Catalinas from Port Moresby, and eight Ansons from a service flying training school at Geraldton, joined in these operations. On 25th November a Hudson from No. 14 Squadron sighted three ship's boats to the north of Carnarvon. The squadron's commanding officer, Wing Commander Lightfoot,[5] directed the detention and initial interrogation of 45 seamen from these boats. They proved to be German sailors from the raider *Kormoran* which, they disclosed, had blown up at sea at midnight on 19th November after an engagement with "a first-class cruiser" (later known to have been H.M.A.S. *Sydney*). When last seen *Sydney* was burning amidships and astern and the German seamen believed that she had sunk. They said the cruiser had approached rapidly and, after a challenge which the raider did not answer, *Kormoran* had opened fire and with her opening salvos put the cruiser's forward turrets out of action. The battle between the two ships had lasted from 5.30 p.m. to 6.25 p.m.

Kormoran was then burning fiercely amidships and later her captain ordered abandon ship. On 27th November the crew of an Anson sighted a lifeboat with about 40 German seamen in it; they were flying a white flag on which were inscribed the words "No water". A naval patrol vessel took their boat in tow and they were detained along with the other survivors.[6]

These air operations, which ended on 29th November, had been conducted from Carnarvon in conditions of great difficulty. One small power pump and three almost unserviceable hand pumps were all that were available for refuelling the aircraft, and the ground staff laboured throughout the night to service 11 Hudsons, 5 Wirraways and from 8 to 13 Ansons. After morning operations aircraft could not be refuelled in time to fly again in the afternoon. Fuel supplies were inadequate and two road

[5] Gp Capt I. J. Lightfoot, 50. Director of Armament RAAF 1942-44; Armament duties in ETO and USA 1944-45. Regular air force offr; of Shenton Park, WA; b. London, 9 Sep 1908.

[6] At 6 p.m. on 24th November the British steamer *Trocas,* bound from Palembang to Fremantle, had picked up a raft on which there were 25 Germans, in position 20 degrees 16 minutes south, 111 degrees 40 minutes east.

convoys were needed to replenish them. It all amounted to bitter, if valuable, war experience in which the men of the R.A.A.F. learned of the loss of a gallant ship's company.

In mid-1940 three organisations were engaged exclusively in aircraft production in Australia—De Havilland Aircraft Pty Ltd, the Commonwealth Aircraft Corporation, and the Government-owned factory group with one factory at Fishermen's Bend, near Melbourne, and another at Mascot, New South Wales (the main assembly works for the Beaufort project). These were working under pressure that had been intensified in May when the British Government was obliged to place an embargo on the export of aircraft materials and equipment. This embargo seriously affected the Beaufort production plan which had included importation of the Taurus engines until these could be built in Australia. The answer was found in a decision to standardise on the American Pratt and Whitney twin-row Wasp engine, for the local manufacture of which keen-sighted Mr Essington Lewis had been the chief prompter in November 1939. But the change to these more powerful engines for the Beaufort enforced the modification of the airframe and practically every part of the control system. One compensation was that the Australian Beaufort would be a faster aircraft than its British counterpart.

In a survey of the war effort which he had given to Parliament on 18th April 1940, the Prime Minister spoke of the relief afforded by the virtual removal of the embargo on the export of aircraft from the United States[7] and of the Government's anticipation of this important change which had prompted the appointment of Mr F. B. Clapp as Australian representative in Washington.[8] This had permitted immediate deliveries so that practically the whole of the original order for 100 Lockheed Hudson aircraft had been fulfilled.

In May 1940 the first Tiger Moth trainer was delivered from the De Havilland works. At the end of this month at a conference at which members of the Air Board and of the Aircraft Production Commission conferred with Essington Lewis in his role as Director-General of Munitions Supply, the whole question of the aircraft requirements of the R.A.A.F. was reviewed. For E.A.T.S. and home defence force training until 1943, 649 elementary trainers would be needed (including provision for estimated wastage). This meant that current orders with De Havilland for 350 Tiger Moths should be increased by 300.

Procurement of supplies sufficient for the production of 811 Wirraways was approved by the War Cabinet in June, but the Commonwealth Air-

[7] On 25th March 1940 the United States adopted a more liberal foreign release policy which authorised the sale to foreign states of certain stipulated modern types—including the Flying Fortress (B-17), Liberator (B-24), Mitchell (B-25), Marauder (B-26), Havoc (A-20A) and Kittyhawk (P-40)—as soon as a superior type could be provided for the USAAC. See Craven and Cate (Editors), *Army Air Forces in World War II*, Vol I, p. 129.

[8] The Prime Minister explained that Mr Clapp had undertaken this responsibility in an entirely honorary capacity. *Commonwealth Debates*, Vol 163, pp. 115-19. (Mr F. B. Clapp and Sir Harold Clapp were brothers.)

craft Corporation was still restricted to a production total of 232. Experience was proving that Wirraway airframes could be produced more rapidly than single-row Wasp engines and that the potential production was greatly in excess of R.A.A.F. needs for that aircraft. Therefore Britain offered to take all Wirraways that could be produced in excess of R.A.A.F. orders, with the provision that any shortage of Wasp engines for these aircraft would be met from British orders placed in the United States. The result was an order for 245 Wirraways to be delivered to Britain by the end of 1942.[9]

Meanwhile the corporation's designers had been at work on a twin-engined light reconnaissance bomber project. This was designed for construction from locally-produced materials and was to be fitted with twin-row Wasp engines. The Air Board, impressed by the claims made for this aircraft at the drawing board stage, recommended that a prototype be built not only to permit performance trials of a promising aircraft, but to keep the corporation's design staff together. The War Cabinet authorised the construction of this prototype bomber,[1] and at the same time approved an order for 200 Wackett Trainers, aircraft which were the result of another local design project which had been developing since 1938 under the direction of the man whose name they bore and who continued to be the mainspring in the mechanism of the only Australian organisation that was originating aircraft. The War Cabinet's decision on this training aircraft was influenced by Britain's difficulty in delivering Ansons, but there was added encouragement in the fact that approximately 30 per cent of the exercises in the service flying training schools could be performed with the Wackett Trainer and the fact that the two prototypes so far built had completed their service trials satisfactorily. Another order, placed by the War Cabinet on the same date in June, was for seven Catalina flying-boats to replace the Empire type flying-boats with which No. 11 Squadron was equipped; at the same time the order for 300 additional Australian-built Tiger Moths was also approved, but subsequently, since 200 Wackett Trainers had been ordered, the order was reduced to 100.

The Chief of the Air Staff told the War Cabinet on 5th June that, when the 100 Hudson bombers and the seven Catalinas had been placed in service and the production of Wirraways had been increased as planned, "a sufficient striking force would be available to make an aggressor think seriously before attacking". This rather optimistic statement was countered to some extent when Burnett reported at the end of June that training was still being retarded through lack of spare parts for Hawker Demons,

[9] The order was increased in October 1940 to 500 with further orders for 300 for 1943 delivery. In November 1940 the rate of output of Wirraways was 34 a month. Further Australian orders raised the total for the RAAF to 481. The number was increased in November 1941 to 564 which was expected to suffice for RAAF needs until June 1943.

[1] This prototype was built and successfully flown, but development of the Beaufort project and the comparatively liberal deliveries of Hudsons from America promised to provide the RAAF's requirements in medium bombers. The Commonwealth Aircraft Corporation therefore concentrated next on designing a fighter aircraft for which the need was urgent, and its first aircraft designed specifically for combat barely passed beyond the prototype stage.

Wirraways and Ansons. By this time the 100 Hudsons from the United States had been delivered, but of more than 1,300 aircraft promised from Britain, chiefly for the Australian E.A.T.S. program, comparatively few had been received and shipments had ceased because of the embargo on the export of all British aircraft. Local production of Tiger Moths had just begun,[2] and the delivery of Gipsy Major engines by General Motors-Holden's Ltd, one of the principal sub-contractors to the aircraft industry, was still some months off.[3] Of 300 of the same engines ordered from Britain, 80 had been delivered and of 150 single-row Wasp engines ordered from the United States only two had been delivered.

By the end of 1940 there was a welcome change in the aircraft situation. The British embargo had been brief and 92 Ansons had been delivered. Britain had also undertaken to supply 189 Oxfords in place of Ansons for Australian service training schools. Fairey Battle deliveries had risen to 88, and 200 Australian-made Tiger Moths and 204 Wirraways had been delivered. Though no Gipsy Major engines had come from Britain local production had reached 84—20 in the last week of December. Fifty single-row Wasp engines had arrived from the United States and 175 had been delivered from the local factory.

New Zealand's troubles in obtaining aircraft were brought before the War Cabinet in January 1941 by a request from the New Zealand Prime Minister that Australia should release to the R.N.Z.A.F. three of the Catalina aircraft it had on order. Alternatively the Empire flying-boats in service with No. 11 Squadron were sought when that squadron was re-equipped with Catalinas. The request was made because New Zealand had failed to obtain five Catalinas through British orders in the United States. The War Cabinet replied that the Catalinas on order could not be released but it "might be possible" to release two of the Empire flying-boats if they were not essential for Empire communications.

The latest details known of the performance of Japanese aircraft which might be brought into the Australian operational area on Japanese warships or aircraft carriers were given to the War Cabinet by the Minister for Air in January. Of chief interest was a reference to a new naval air service single-seater fighter put into production in 1940, which "appeared to be a development of the naval type 96".[4] Its armament was said to be two 20-mm cannon and two 7.7-mm machine-guns and its top speed was given as 300 miles an hour.

Several days later the Minister for the Army, Mr Spender, at a meeting of the War Cabinet, referred to the impression that the Wirraway would

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[2] At 30th June 1940 the delivery rate was one each working day. In March 1941 this was doubled and maintained at that rate until the contract was completed.

[3] The first of these engines was delivered in September 1940.

[4] In designating aircraft the Japanese used the last one or two digits of the year of production. In the Japanese calendar the year 2600 corresponds with 1940 in the Christian calendar: thus aircraft produced in 2596 (1936) were designated Type "96", those in 2599 (1939) Type "99" and those in 2600 (1940) Type "0". At first only the Mitsubishi Type "0" fighter was widely known to the Allied forces and it merited the obvious pseudonym "Zero". Later, when other Japanese Type "0" aircraft were encountered, easily pronounced code names were adopted by the Allies for all Japanese aircraft. Type "0" or "Zero" became known, for example, as the "Zeke". For further details see Appendix 4.

generally be able to counter Japanese seaborne aircraft. The information given on Japanese aircraft performances suggested that the Wirraway would not be able to compete with them. Burnett, who was present, replied that he thought the high-powered Japanese aircraft referred to would be relatively few in number. Having regard to the type of Japanese aircraft that would be used in an attack on Australia he believed that the Wirraway would be able to make "quite a good show". It was an obsolete type, but it had some fighting value.

When the War Cabinet reviewed aircraft production in February there were questions as to why the Commonwealth Aircraft Corporation had not fulfilled its program. The chairman of the Aircraft Production Commission, Sir Harold Clapp, said that it appeared that the delays were largely due to failure on the part of United States manufacturers to deliver tools and equipment and to the fact that engine parts were not being received from overseas as promised. Local production was now meeting these needs. The Minister for Air, Mr McEwen, said he had doubts about the promised production of 360 Wirraway airframes for the year. The corporation had not lived up to its promises in the past and he thought it was still too optimistic.

There was also criticism at this time of the "failure" of the Government aircraft factories to produce Beauforts.[6] At a meeting of the Advisory War Council in February the explanation was given that the delay was due chiefly to the sinking of ships by enemy action, causing loss in materials and components. An increase from 180 to 270 in the number of Beauforts to be built in Australia, thus making 180 available for the R.A.A.F., was approved by the War Cabinet on 12th February 1941. Later, on learning that 52 Hudsons could be obtained,[7] the order for 90 additional Beauforts was reduced to 38, and even this was cancelled when the number of Hudsons to be purchased from the United States was increased to 146—a purchase which disposed of the question of Australia taking over Britain's initial order for 90 Australian-made Beauforts.[8] This reduction of the Australian orders for Beauforts might well have represented a serious setback to the Government aircraft factories but for the decision of the British Air Ministry to order an additional 90 Beauforts from Australia, thus restoring the production program to 270 aircraft.

The decision to increase the Hudson order from 52 to 146 had been prompted by a cablegram from Mr Menzies, then in Britain, stating that these aeroplanes might be obtained earlier than the Australian-made Beauforts. The War Cabinet gave its final approval to this order on 20th May

[6] The first Australian Beaufort, an experimental aircraft assembled largely from parts supplied from Britain, made its first flight (from Fishermen's Bend to Laverton) on 5th May 1941. Five more of these aircraft were then being assembled. The first production Beaufort was completed in August 1941.

[7] Since the United States Government would not permit the export of engines in excess of 5 per cent of completed aircraft, the War Cabinet had amended its current order from 39 Hudsons and 42 engines to 52 aircraft and 16 engines.

[8] In July 1941 War Cabinet decided that the RAAF should form three air transport units equipped with nine Hudsons each (including reserves). Subject to British approval these aircraft were to be included in the delivery program for the 146 Hudsons on order.

when it authorised expenditure to cover the cost of the Hudsons and of 243 general purpose two-seater Brewster Buffaloes, sought from the United States as replacements for the Wirraways, and 54 long-range two-seater fighters, the new British Beaufighter,[9] of which 12 were to be delivered by December 1941 and the remaining 42 in instalments by March 1942.

It was noteworthy that, despite Britain's urgent need for operational aircraft, Australia's needs were being given a high priority by the British Government. Of Australia's imports of American aircraft a substantial proportion came from the transfer of British orders to the Commonwealth. To meet Australia's need for Buffaloes, the British Air Ministry undertook to allocate one-third of the total Britain received in the first three months of delivery (Buffaloes were then expected to reach Britain from America almost immediately) and one-half of the subsequent monthly deliveries until Australia had received a total of 243. Similarly with Hudson deliveries, the first 100 received by the R.A.A.F., 98 of which were delivered by 20th June 1940, had come from orders placed by Britain.

Early in 1941, in his capacity as an executive member of the Aircraft Production Commission, Mr John Storey,[1] an eager advocate of Australian production, accompanied the Prime Minister on his visit to Britain. In May, about the time when the Beaufort was making its trial flights in Australia, Mr Storey returned with a conviction that was stronger than ever about Australia's potential capacity for building aircraft. In his report he recommended the local manufacture of the Bristol Beaufighter and of the Avro Lancaster, Britain's latest long-range bomber which promised quite remarkable bomb-carrying capacity and endurance. These aircraft, he said, should be built in the Government factories simultaneously with the Beaufort program. As he saw it Australia needed the Beaufighter for reconnaissance and fighter operations in support of ground forces. There was comparatively little emphasis on fighter aircraft needs for home defence, but fighter escort for striking forces, particularly against aircraft carriers, was a most probable need. The Beaufort and the Beaufighter had about 75 per cent of their components and production technique in common, and extension from Beaufort to Beaufighter production was logical. The argument favouring production of the Lancaster, for which a non-stop flight from, say, Brisbane to Perth, would be quite practicable, took into account the contention that the air defence of the Commonwealth and its territories must depend largely upon the mobility of a limited number of operational squadrons; the greatest value lay in a type of aircraft that was suitable for both long seaward reconnaissance flights

[9] The Beaufighter, a fast, twin-engined, long-range "intruder" aircraft developed by the Bristol Aeroplane Company in England from the Beaufort for coastal reconnaissance and night fighting, had been ordered after the War Cabinet had noted (on 9th May 1941) that it "appeared to be the only type of aircraft meeting the Australian Air Staff's needs for a high performance, two-seater fighter".

[1] Sir John Storey. Director Beaufort Division, Dept of Aircraft Production, 1942-46; Chairman, Joint War Production Cttee, Defence Dept; Chairman, Immigration Planning Council, 1949-55. B. Sydney, 1 Nov 1896. Died 3 Jul 1955.

and for strikes against enemy seaborne forces. The heavy bomber, Storey argued, commended itself for these roles—increased reconnaissance range could be gained at the expense of bomb-load and effective long-range striking power could be obtained with the same aircraft. But to counter this impressive argument there was the fact that the relatively small number of aircraft such as the Lancaster which the Australian industry could produce within a practical time would not meet the requirements of the R.A.A.F. with its huge geographical commitments nearly as effectively as a larger number of medium bombers like the Beaufort. Further, the Lancaster was then regarded as being less vulnerable when employed in night operations against land targets and in conditions favourable for level bombing. The R.A.A.F. would still need other aircraft for torpedo and dive-bombing attacks for which the Lancaster was unsuitable.

Acknowledging these disabilities in the Lancaster for the purposes of Australian defence, in addition to the important fact that its production would seriously restrict the output of Beauforts, the War Cabinet decided that at this stage its production would be premature. It did agree that a limited Beaufighter program should be incorporated in the Beaufort project so as to produce aircraft at the rate of 40 a month (plus the equivalent of 8 additional aircraft in the form of spare parts) on the basis of 34 Beauforts and 14 Beaufighters, and that a second engine factory should be established to build 1,600 horsepower Wright Cyclone engines for the Beaufighters. On 24th July these proposals were submitted to Mr Bruce for discussion with the British authorities.

Bruce's reply brought a new aircraft into the picture. On 18th September he informed the Australian Government that prototype tests with the De Havilland Mosquito, a long-range fighter of great promise, suggested that this aircraft, with a range and speed substantially greater than those of the Beaufighter, with an equal endurance and heavy fire-power, might well replace that aircraft. It was suggested in Britain that Australia should concentrate on the projects in hand, both for airframes and engines, and refrain from planning for the production of new types; the recent excellent performance of the Beaufort in combat operations was taken as evidence that there was no other yet designed that could replace it in its class. Beaufort requirements "east of Suez" (including Australia's needs) were estimated at 40 a month until at least the end of 1943. If Australia could produce this aircraft complete for service at that rate the British Government would accept the difference between Australia's needs in this aircraft and that monthly total. On the other hand Britain's operational requirements in Beaufighters were covered by her own production program and, as large orders for Mosquitos were expected, Australian-built Beaufighters would not be required by the R.A.F. The Beaufighter production plan was therefore deferred, and on 3rd October Menzies informed Bruce that the Australian industry would increase Beaufort production to the rate of 40 a month immediately, in full confidence of British aid in procuring additional machine tools and supplies.

CHAPTER 7

THE MALAY BARRIER

THE achievement of the home defence and Empire Air Training Scheme programs was the main task of the R.A.A.F., yet the force was also being used to aid Britain in weaving a pattern of defence in the Pacific and the Far East. With Dutch participation and increasing American interest, this pattern was now taking shape, but there were misgivings about the texture and durability of the fabric.

By the beginning of July 1940, the first R.A.A.F. Hudson unit (No. 1 General Reconnaissance Squadron) was on its way to Singapore and plans were being made to dispatch a second Hudson squadron (No. 8) and No. 21 (General Purpose) Squadron, with Wirraways, before the end of the month.[1]

The Australian Chiefs of Staff, on 23rd August, examined the latest appreciation by the British Chiefs of Staff and noted a declaration by the British Prime Minister, made on 12th August, that, should Japan, acting against "prudence and self-interest", attempt to invade Australia or New Zealand on a large scale, he had the explicit authority of his Cabinet to assure Australia that Britain would cut her losses in the Mediterranean and come to the aid of the Commonwealth or New Zealand, sacrificing everything except the defence of Britain on which all depended. Important reservations to this dramatic declaration were to come later[2] but the immediate reaction of the Australian Chiefs of Staff was to underline the importance to Australia of the defence of Malaya and the holding of Singapore, without which the British Fleet would have no suitable base for operations in the Far East. They asserted that Australia should strain all efforts to cooperate in the actual defence of this area which, strategically, they regarded as of greater ultimate importance to Australia than the Middle East. The security of Singapore appeared to depend largely on the defence of Malaya as a whole and, to a lesser degree, on the denial to the Japanese of the use of air bases in Indo-China and Thailand and of the air and naval bases in the Netherlands East Indies. Unopposed Japanese occupation of the East Indies would result in strategic disabilities so great that Australia should support the Dutch if Japan attempted to seize the islands, unless the British Government considered that the delay of a declaration of war against Japan would more than compensate for this loss. The opinion of the British Chiefs that the scale of attack on Australia or New Zealand would probably be limited to cruiser raids,

[1] Each squadron had 12 aircraft plus 6 in reserve.

[2] On 22nd March 1941 the War Cabinet was informed by Mr Menzies, then in London, that he had learned that such a dramatic step certainly would not be practicable until after a lapse of considerable time and, even then, might not be possible. Menzies contended that a general declaration of this nature should be resolved into a specific plan that would be really practicable. The large forces in the Middle East, for example, including three Australian divisions, could not just be left to their fate. Their withdrawal would take time; shipping would have to be provided and convoys and naval protection organised.

possibly with light-scale seaborne air attack on ports, was not fully accepted. The possibility of medium-scale attack, and even invasion, could not be ruled out. It was true that with the Netherlands East Indies in their possession, the Japanese could blockade Australia and raid her coasts and shipping without serious risk. But, should the Japanese hold this advantage and have Singapore either in their hands or rendered comparatively impotent by the absence of a British or American Fleet, the invasion of Australia could be contemplated.

So far as the R.A.A.F. was concerned, they added, taking into consideration its commitments for the E.A.T.S., and the unsuccessful attempts to obtain an adequate number of aircraft from Britain and the United States, it would be extremely undesirable to reduce the Service squadrons in Australia below their existing strength, which was barely enough to meet the training requirements for the maintenance of five squadrons overseas and the Home Defence air force. To this assessment the Australian Chiefs of Staff made a proviso: if conditions made necessary cooperation with the Dutch in the East Indies, two general reconnaissance landplane squadrons could be based at Darwin to operate in the islands, using Dutch aerodromes if need be as advanced bases.

While this planning was going on No. 8 Squadron, commanded by Wing Commander Heffernan,[3] had flown its aircraft to Sembawang near Singapore where, on 9th August, it had joined No. 1, commanded by Wing Commander Walters.[4] The technical and administrative staff of No. 8 Squadron embarked at Sydney on 10th August in the liner *Strathallan* which also took on board at Melbourne on 13th August No. 21 Squadron, commanded by Squadron Leader Wright.[5] In the same ship were Group Captain Brownell[6] and the staff of a station headquarters to be formed at Sembawang to administer the R.A.A.F. squadrons in Malaya. Two weeks later this headquarters had established itself as a R.A.A.F. station within the R.A.F. Far East Command. The three Australian squadrons each contained a nucleus of regulars supplemented by members of the Citizen Air Force. All were equipped, maintained and paid by Australia. The Hudson aircraft were lightly armed defensively and had a bomb capacity of 1,000 pounds.

A sharp reminder of Japanese hostility was provided by the signing, on 27th September, of a ten-years military, political and economic "defensive" pact between Japan, Germany and Italy. The implications for Aus-

[3] Air Cmdre P. G. Heffernan, OBE, AFC. Comd 1 Sqn 1939, 8 Sqn 1939-41, 4 SFTS 1941-42, RAAF Stn Richmond 1942, Pearce 1942-43; 27 OTU RAF 1943-45; Director of Training RAAF 1945-46. Regular air force offr; of Melbourne; b. Bowenfels, NSW, 16 Apr 1907.

[4] AVM A. L. Walters, CB, CBE, AFC. Comd 1 Sqn 1940-41; Director of Operations AAF 1942; comd 1 (Fighter) Wing 1942-43, 72 Wing 1943-44; Director of Air Staff Policy and Plans RAAF HQ 1944; AOC Northern Cd 1945. Regular air force offr; of Perth, WA; b. Melbourne, 2 Nov 1905.

[5] Air Cmdre F. N. Wright, OBE, MVO. Comd 21 Sqn 1939-41, 8 Sqn and RAF Stn Kota Bharu 1941; Director of Training RAAF 1943-45. Oil company representative; of Box Hill, Vic; b. Kalgoorlie, WA, 1 Oct 1905.

[6] Air Cmdre R. J. Brownell, CBE, MC, MM. (1st AIF: 9 Bn, 3 Fld Bty and RAF.) Comd Western Cd RAAF 1938-40, RAAF Far East and RAF Stn Sembawang 1940-41; AOC 1 Training Gp 1941-42, Western Area 1943-45, 495 Gp SWPA 1945. Regular air force offr; of Perth, WA; b. New Town, Tas, 17 May 1894.

tralia in this pact were obvious; while Japan would "recognise and respect" the leadership of Germany and Italy in the establishment of a "new order" in Europe, Germany and Italy, in turn, would "recognise and respect" the leadership of Japan in the establishment of a "new order in Greater East Asia".

On 22nd October a defence conference began in Singapore. All three Australian fighting Services were represented by their Deputy Chiefs of Staff,[7] Air Commodore Bostock being the air force delegate. For ten days this conference examined evidence that was alarming in its revelation of the inadequacy of defence measures throughout the Far East.

The general conclusion of the Australian delegation was that, in the absence of a main fleet in the Far East, the forces and equipment then available for the defence of Malaya were totally inadequate to meet a major attack by Japan. A tactical appreciation prepared by the Commander-in-Chief, China Station (Vice-Admiral Layton[8]), the General Officer Commanding Malaya (Lieut-General Bond[9]) and the Air Officer Commanding the R.A.F. in the Far East (Air Vice-Marshal Babington[1]) and dated 16th October, allotted roles to the three fighting Services. That for the air forces was responsibility for the defeat of the Japanese attack —"if seaborne, at sea and during landing; if land-based, by attack on advancing troops, landing grounds, lines of communication, concentrations of troops, bases and other military objectives; in the air, by defensive fighter tactics and by offensive bombing operations against Japanese air establishments." The roles allotted to the navy and the army, though essential and inter-related, were subordinated to that for the air forces in immediate planning. The appreciation included this depressing, if realistic, statement:

> Our ability to hold Malaya beyond the immediate vicinity of Singapore in the face of a determined attack is very problematical. Moreover, in the event of successful invasion, the survival of Singapore for more than a short period is very improbable.

The conference recommended immediate extension by the Australian Government of air force ground organisation and facilities in Australia and the New Guinea-Solomon Islands-New Hebrides area. The British Government should be asked to hasten the allotment of aircraft so that Australia could meet its share of responsibility for air concentration in Australia and in the Pacific islands.[2] The minimum strength in aircraft

[7] The full delegation was: Capt J. Burnett, Asst Deputy CNS, Maj-Gen J. Northcott DCGS, Air Cmdre Bostock DCAS, Lt-Cdr G. C. Oldham, Maj C. H. Kappe, and Sqn Ldr W. L. Hely.

[8] Admiral Sir Geoffrey Layton, GBE, KCB, KCMG, DSO; RN. Comd 1st Battle Sqn and Second i/c Home Fleet 1939-40; C-in-C China Stn 1940-41, Eastern Fleet 1941-42, Ceylon 1942-45, Portsmouth 1945-47. B. 20 Apr 1884.

[9] Lt-Gen Sir Lionel Bond, KBE, CB; GOC Malaya 1939-41. Regular soldier; b. Aldershot, England, 16 Jun 1884.

[1] Air Marshal Sir John Tremayne, KCB, CBE, DSO. AOC RAF in Far East 1938-41; AOC-in-C Technical Training Cd 1941-43; Head of RAF Mission in Moscow 1943. B. 20 Jul 1891. (Renounced surname of Babington in 1945.)

[2] British planning at this time aimed at having ready about the end of 1942 6,600 front-line aircraft. The RAF plan revealed development in strategic thought for it included provision of 4,000 heavy and medium bombers by the summer of 1941 instead of 2,800 contemplated a year earlier. Hancock and Gowing, *British War Economy*, pp. 213-15.

required by the R.A.A.F. for this purpose was 320 and the deficiency in modern aircraft at that time was 278 initial equipment planes without reserves. From her own production Australia's potential contribution in offsetting the total deficiency in modern aircraft in the Far East area was limited to 180 Beauforts. For Australia's air operational areas the concentration of aircraft proposed was: north Australia 96, south-east Australia 96, south-west Australia 48, New Guinea-Solomon Islands and New Hebrides 18. With these recommendations the Australian War Cabinet agreed.

Courses of action that the conference considered to be open to the enemy included: invasion of Australia or New Zealand, which might be ruled out if American intervention was probable; seizure of the islands to pave a way for invasion of Australia or New Zealand, and seizure of bases for attack on trade and convoys in Australian waters; attack on Hong Kong, which was probable; attack on Malaya with the object of seizing Singapore, which would be a vital blow and "must be defeated" (the enemy might already have occupied Indo-China and Thailand); an attempt to seize British Borneo, which would be difficult to withstand without command of the seas; attack on Burma by land and air from Indo-China and Thailand; attack on the Netherlands East Indies or Timor to secure bases for further operations; an attempt to seize Darwin for a base, which was unlikely because communications and maintenance would both present difficult problems, though an attempt to destroy Darwin's port facilities was probable.

The conference decided that the Far East area should be divided into the following air operational zones: Burma-Malaya-British Borneo, Netherlands East Indies, north Australia, south-east Australia, south-west Australia, New Guinea-Solomon Islands-New Hebrides, New Zealand, Fiji-Tonga, Indian Ocean. To meet the possibility of land and air attack on the first two zones from Indo-China and Thailand 400 aircraft (not including reserves) should be concentrated within range of Japanese forces in any locality except British Borneo where the maximum concentration would be 200. The minimum aircraft strength needed for effective Far Eastern defence[3] was estimated thus:

Burma and Malaya	582	
Netherlands East Indies	346	
Australia	312	
New Zealand	60	
New Guinea-Solomons-New Hebrides reconnaissance line	8	(flying-boats)
Fiji-Tonga	9	
Indian Ocean	87	

For Australia the task of estimating Japan's course of action and endeavouring to influence it was increasingly touchy. On 29th October the Advisory War Council held its first meeting. It called for evidence on

[3] The tactical appreciation of 16th October 1940 recommended 16 fewer aircraft than the total agreed to by the conference.

all manner of vital war issues from witnesses representing a wide range of Service and civilian authorities. At this meeting Sir John Latham, whose appointment as first Australian Minister to Tokyo was agreed to by the council as "desirable", outlined his conception of the policy Australia should adopt towards Japan. This included a suggestion that the Commonwealth might, as a palliative, place an order with Japan for about £500,000 worth of aircraft. It was possible that such a transaction might put Japan's interests in opposition to those of Germany. The council decided that the proposal should be examined and inquiries made about the types of aircraft Japan could offer. About a month later the Aircraft Production Commission reported that Mitsubishi Shoji Kaisha Ltd was anxious to supply both Service and training types of aircraft. In the negotiations a type similar to the Avro Anson had been sought, but the conditions offered by the Japanese company did not provide for complete delivery until the end of 1941 when, it was considered, the aircraft production capacity of the British Commonwealth would be "more than adequate for all requirements".

The arrival of Air Chief Marshal Sir Robert Brooke-Popham at Singapore on 14th November 1940 to take up appointment as Commander-in-Chief, Far East, brought an infusion of vigour into the planning but it was planning for a vast area with very limited resources. Brooke-Popham had been made responsible for the operational control and the general direction of training of all British land and air forces in Malaya, Burma and Hong Kong and for the coordination of plans for the defence of these territories. He was to be concerned primarily with matters of major military policy and strategy, as distinct from administrative responsibility for normal day to day functions. He was authorised to communicate directly with the Australian and New Zealand Defence Departments on routine matters but was required to use the appropriate British Service departments for matters of major policy. Brooke-Popham had high qualifications for his new task. He had been a captain in the regular army when, in 1912, he joined the Royal Flying Corps. He served with distinction during the war of 1914-18, transferred to the Royal Air Force and became first commandant of its staff college. From 1928 to 1930 he had commanded the air and ground forces in Iraq and from 1931 to 1933 had been in charge of the Imperial Defence College. After some years as Inspector-General of the R.A.F. he had retired in 1937 to become Governor of Kenya, but was recalled to the Royal Air Force in 1939. He was now 62 —two years older than General MacArthur, his opposite number in the American colony of the Philippines. In Malaya he found himself facing the prospect of organising an area for defence with the odds immensely against him and authority divided: despite his titular appointment he had no naval responsibility in the area and he was specifically under the direction of the British Chiefs of Staff who could, at the outset, give him no greater encouragement for the air defence he was to organise than an instruction that the total of 582 aircraft recommended as essential by the

Singapore Conference, must be reduced to 336.[4] This, it was held, should give "a very fair degree of security".

It was clear that Burma's defence must depend very largely on holding Malaya, the defence of which therefore must have priority. As Brooke-Popham saw it the Japanese were unlikely to attack Burma solely to cut the Burma Road to China.[5] To do so would involve Japan in war with Britain, probably with the Dutch and perhaps with the United States. If Japan was prepared to face such consequences she would be more likely to attack Singapore directly. Thus the Commander-in-Chief sought to concentrate his maximum air effort in Malaya. There had been some question of whether Burma should be controlled from India. The view of Air Headquarters in Malaya was that Burma should be retained in the Far East Command because the effective coordination of air forces operating from Burma and Malaya in defence of the Far East theatre could be achieved only by unified command.

The problems of air defence in Burma were complicated both by the terrain and the difficulty of assessing enemy intentions. Dense forest along the probable line of a Japanese invasion was generally unfavourable for air reconnaissance, though certain open defiles offered areas for effective bombing, and the hope was to have sufficient air strength to deter a Japanese advance. Airfields were being built for the concentration of air operations over either central or southern Burma. Eight new air bases were needed and aerodrome construction was given first preference in the allocation of very limited engineering equipment. Landing grounds were established on the Tenasserim Peninsula to facilitate the movement of aircraft between Burma and Malaya, the most important being at Tavoy, Mergui and Victoria Point, this last being particularly isolated and probably soon untenable if war came. To develop the new bases and to command the air forces then located in Burma, Group-Captain Manning,[6] an Australian who had retired from the Royal Air Force a few years before the war, was appointed in March 1941. His task was great and his resources few but he went to work with much energy.[7] Inter-Service relations in Burma were excellent and the army did everything possible to assist the R.A.F. in its preparations. The raising and training of aerodrome defence troops were conducted parallel with the construction of the airfields

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[4] This allocation was for the defence of Malaya and Borneo and for trade protection in the north-eastern section of the Indian Ocean; it did not provide for the defence of Burma.

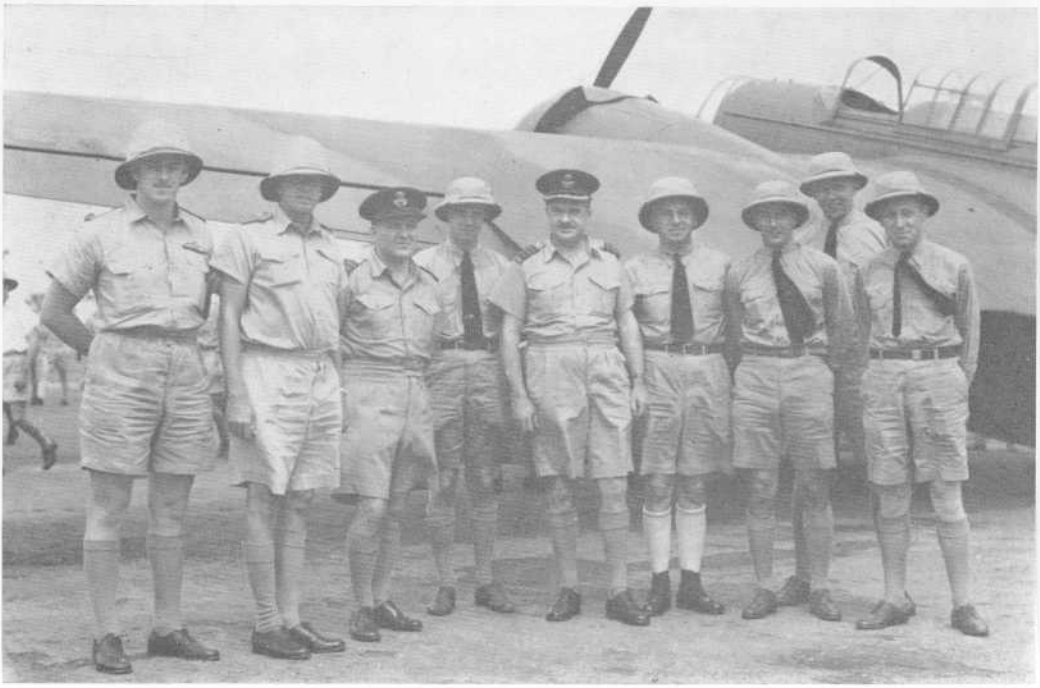
[5] The Burma Road was officially opened in January 1939. On 24th June 1940 Japan sought its closure and after diplomatic exchanges and despite China's protests, Britain, on 16th July, agreed that it should be closed for 3 months. Britain reopened the road on 30th September—a sharp reaction to Japan's pact with Germany and Italy.

[6] Air Cmdre E. R. Manning, CBE, DSO, MC; RAF. (1914-18: 15 Hussars and RAF.) HQ FEAF (RAF) 1939-41; comd 221 and 223 Gps RAF 1941-42; Air HQ, India, 1942; comd 1 PDRC 1943-45. Stock and share broker; of Sydney; b. St Leonards, Sydney, 14 Feb 1889. Died 26 Apr 1957.

[7] AVM Sir Paul Maltby later AOC Far East RAF, who subsequently compiled the official despatch on the air operations in this theatre, wrote: "Although the Group staff was very small, progress was so good that all bases were completed by the end of 1941, with accommodation at each for some 450 all ranks. Facilities for dispersal were reasonable, pens being provided, as were some satellite strips. There was a measure of A.A. protection in the Rangoon area but none elsewhere."

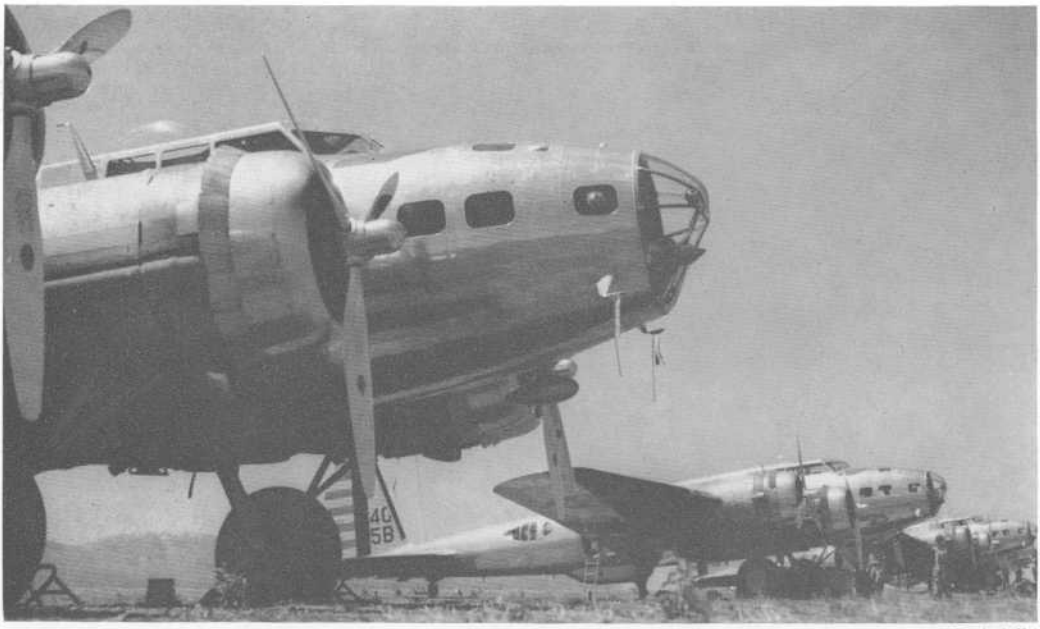


Air Chief Marshal Sir Robert Brooke-Popham, Commander-in-Chief Far East, and General Sir Archibald Wavell.



(*R.A.A.F.*)

Officers of No. 13 Squadron and of the Royal Netherlands Air Force at R.A.A.F. Station, Darwin, on 16th March 1941. From left to right in open collars the R.A.A.F. officers are: F-O W. T. M. Boulton, Gp Capt C. Eaton (the station commander), W Cdr W. H. Garing and Gp Capt. F. W. F. Lukis. A Netherlands Glenn Martin bomber is in the background.



(*R.A.A.F.*)

Early type Flying Fortresses (B-17s) at Port Moresby, en route to the Philippines, on 10th September 1941.

themselves. But in the light of the task that would have to be performed if war came, the air strength in Burma was almost negligible in quantity: there were not even the restricted forces recommended by the Singapore Conference—one general reconnaissance, two bomber and one fighter squadrons. In February 1941 No. 60 Squadron R.A.F., equipped with Blenheim bombers, arrived from India and in November a Buffalo squadron (No. 67 R.A.F.) was sent from Malaya. No. 60 attained a very high standard of flying in monsoon conditions. Even so it was decided to transfer all but one flight temporarily to a newly-established air-armament school in Malaya so that it could be brought up to date in operational practice. The transfer was made at the end of November, leaving the R.A.F. in Burma with only one fighter squadron and one flight of bombers apart from a flight of six Moth aircraft used for training Burma's own volunteer air force; these aircraft were used for communications duties and certain limited reconnaissance work.

Offsetting, to some extent, this serious reduction of Burma's slender air strength, there was the American Volunteer Group of the International Air Force which began training in Burma in August for service in China.

In 1941 Japan and China had been at war for four years—since 7th July 1937. If Japan was now to attack in south-east Asia it could be with less than half of her army, because most of the rest of it was engaged in China—but her navy was free to undertake any new adventure, and her air force, after some early setbacks, commanded the skies over China and might well seek new skies to conquer.

After the Japanese occupation of Manchuria in 1931 it had been evident that eventually a war would be fought in China between, on the one hand, the mounting imperialism of Japan, and on the other, the Chinese plutocracy led by Chiang Kai-shek, perhaps supported by Japan's rival in the Pacific—the United States. In an effort to acquire some of the technical skill in warfare that the Japanese possessed, Chiang had, by 1936, established in China a German military mission, an Italian aviation mission and an American flying school.[8]

In May 1937, first Mr W. H. Donald,[9] Chiang's Australian-born adviser, and then Madame Chiang Kai-shek, welcomed to China a new American air adviser, Captain Claire Chennault, aged 47, just retired from the United States Army Air Force. Chennault was captivated by Madame Chiang—"one of the world's most accomplished, brilliant and determined women," he wrote later[10]—and Chennault remained in China to organise what became the strongest aid to reach the soil of Chiang's China from outside.

[8] The first American flying school was established in 1932 by Col John Jouett, who had the support of Mr T. V. Soong, then Minister of Finance. In 1933 Chiang appointed Soong's brother-in-law, Dr H. H. Kung, in his place. Kung had recently spent some time in Italy and soon an Italian air mission headed by Col Lord, arrived in China. Italian aircraft were bought and an assembly works established at Nanchang, Italy reaping a harvest in the resultant expansion of her aircraft industry.

[9] William Henry Donald. South China Correspondent *New York Herald* 1911-19; Editor *Far Eastern Review* 1911-19; Confidential Adviser to Chiang Kai-shek 1928-42; captured by Japs and interned in Manila, PI. B. Lithgow, NSW, 22 Jun 1875. Died 9 Nov 1946.

[10] Claire Lee Chennault, *Way of a Fighter* (1949), p. 35.

At the outbreak of the war with China, Japan possessed comparatively large and integrated military and naval air services, armed from her own factories and organised with the aid of foreign advisers, notably the Master of Sempill.[1] Thus, with the aid of French, British and American and, in more recent years, German instruction the Japanese built up both military and naval air services to meet their own needs but without copying exactly the organisation of any one of the other powers. No appreciable cooperation existed between the two fighting Services, the army air force existing solely to support land forces, and the navy air force having responsibility for coastal defence, convoy protection and all sea patrols, including anti-submarine operations.

The Chinese, on the other hand, had a small and conglomerate air force built round machines and instructors drawn from five or six Western nations—including Australia, since among her senior air advisers in the 'thirties had been Garnet Malley,[2] an outstanding fighter pilot in the Australian Flying Corps in France in 1917-18. When Chennault arrived the Italian advisers were in the ascendant but their schools were inefficient, the Fiat fighters and Savoia bombers which they assembled in China and sold at high prices were obsolete, and they succeeded in persuading the Chinese officials that they possessed far more serviceable aircraft than they really did.

When fighting began on 7th July 1937, China had about 150 competent army pilots and about 200 of poor ability. She had approximately 90 front-line military aircraft, mostly fighters, the best being of American manufacture. As soon as the war began the Italian mission departed and the training of the Chinese Air Force was left to Chennault's American mission. Chennault himself has described the next four years of air fighting over China. The Chinese entered the war with three fighter groups equipped chiefly with American Curtiss and Boeing machines. Under Chennault's guidance the Chinese employed effective interception tactics and shot down so many bombers that the Japanese abandoned unescorted daylight bombing. The Chinese then succeeded in shooting down night bombers in numbers alarming to the Japanese—7 out of 13 in one night.

[1] These services had their beginnings in a visit by two Japanese Army officers to France in 1911 to undergo air training and in the establishment, a year later, of a naval air training school near Yokosuka by naval officers who had received air training in both France and the United States. In 1919 a French mission of about 60 airmen went to Japan to assist in establishing an aviation section for the Japanese Army and in the next year—the year in which the navy completed its first aircraft carrier—the first Japanese military aviation school was opened near Tokyo. In 1921 a group of retired RAF officers (of whom the Master of Sempill was one) and other ranks, with other aviation experts, helped to reorganise the naval air arm. Later British missions gave instruction in aircraft inspection, tactics, gunnery and armament. When the London Naval Treaty of 1930 restricted Japanese naval construction, the naval air arm continued to expand. Meanwhile, and dating from 1924 when, following a substantial reduction of the army, the Army Air Service was given equal status with the infantry, cavalry and artillery, this branch grew, until by 1930 it consisted of 26 squadrons, 3 schools and 2 balloon companies. By 1936 the post of air corps commander had been created, the officer holding this appointment being responsible to the Emperor with status comparable to that of the Minister of War and the Chief of the Imperial General Staff—RAAF Intelligence Memorandum No. 6, 7th October 1941.

[2] Group Capt G. F. Malley, MC, AFC. (1st AIF: Arty and 4 Sqn AFC.) Aviation Adviser to Chinese Govt 1930-40; Director of Combined Operational Intelligence RAAF 1942; Staff Officer i/c Chinese Section, Aust Security Service 1944-45. Warehouse manager; of Mosman, NSW; b. Mosman, 2 Nov 1893.

The Japanese learned quickly and by September 1937 were escorting their bombers with strong fighter groups and causing the Chinese heavy losses that they could not easily replace. Before the end of the year the Chinese Air Force had been virtually destroyed. The Japanese, on the other hand, had gained immensely valuable experience. In fact Chennault had helped to teach them lessons that were to be immensely valuable to them a few years later.

In October, when the Chinese were still fighting in the outskirts of Shanghai, reinforcements arrived from Russia—the only solid response to the Chinese appeal for help from the "neutral" powers. Complete squadrons arrived at Nanking, Hankow, Sian and elsewhere, flying schools were established, and about 400 aircraft imported for use by the Chinese force. At length the Chinese Air Force was armed practically entirely with Russian machines. In this phase air fighting over China was often on a big scale; Chennault describes one battle in which 40 Russian and 20 Chinese-manned fighters took part and 36 out of 39 Japanese aircraft were shot down. Both Russians and Japanese were testing their machines and tactics in China as were Russians, Germans and Italians in Spain. The Russian squadrons were relieved every six months to spread the combat experience widely.

In the autumn of 1938, at Madame Chiang's suggestion, an international squadron of foreign volunteers was formed. It ceased to exist when its bombers were destroyed on the ground. Late in 1938 the war in China entered a new phase; the Chinese began to rely on guerilla operations. The Japanese, unwilling to commit their armies to further large-scale operations, began an attempt to break Chinese resistance by sustained bombing of their cities. In January 1939 the first raid was made on Chungking. "During the spring the bombing offensive exploded all over Free China like giant firecrackers at a macabre festival," wrote Chennault.[3] In 1939 the raids on Chungking were made usually by 27 bombers; in 1940 by from 90 to 100, protected by the new, fast and manoeuvrable Zero fighter. Against these the out-dated fighters that the Chinese were flying had no chance, and by the autumn of 1939 the Russian squadrons had left China. Later in the year, however, the Russians administered a particularly severe blow to the Japanese air force in Manchuria. This the Japanese themselves subsequently claimed was worth while because it forced them to adopt important changes in organisation, training and tactics, though to foreign observers the principal change was in the acceleration of the rate of expansion.

In October 1940 Chiang summoned Chennault and persuaded him to go to America to endeavour to obtain American aircraft and pilots to fight the Japanese. Chennault agreed and conceived an ambitious plan of checking Japan by air attack first on shipping and airfields at her advanced bases in Formosa, Canton and Indo-China and later by burning the

[3] Chennault, p. 87.

homeland cities with incendiaries. He estimated that he could achieve this with a cadre of American pilots to lead the Chinese, 500 aircraft in 1941 and 1,000 during 1942. He proposed at the outset to form one group armed with P-40B (Tomahawk) fighters and one with Hudson bombers. After long negotiations in Washington aircraft were allotted to the Chinese, and President Roosevelt signed an order permitting reserve officers and men to resign from the army, navy and marine air forces to join an American Volunteer Group in China. The order was not made public and the project was disguised as a training organisation; Chennault was described on his passport as a farmer. The pilots were given a one-year contract at salaries from 250 to 750 dollars a month, and were told that the Chinese might pay 500 dollars for every Japanese aircraft destroyed.

Because of delays in Washington the first group arrived too late to be ready for action when the clear summer days began in China. When Chennault, and later the volunteers who were to form the fighter group, arrived in Burma it was evident that the aircraft could not reach China before the monsoon made the Chinese airfields unserviceable, and he obtained leave to use a paved field of the Royal Air Force near Toungoo, in Burma. Chennault's meetings with R.A.F. officers in Burma and Malaya convinced him that they, like the American air force officers, were gravely underestimating the quality of Japanese aircraft and tactics. Inevitably the task of organising this irregular group on an air station belonging to a Power at war in Europe but preserving a careful neutrality towards Japan and likely to be ruffled by the unorthodoxy of the whole enterprise presented many difficulties. Chennault received generous support from Brooke-Popham but complained that Manning was uncooperative. Recalling that the A.V.G. started to train in Burma in August 1941, Brooke-Popham wrote that there was an understanding amounting practically to an agreement with Chiang Kai-shek that, if Burma was attacked, part or the whole of this volunteer group would be detailed for the defence of Burma. Chennault's group then consisted of three single-seater fighter squadrons equipped with Tomahawk aircraft. By October the group was ready for action.

In the same month the British Ambassador in Chungking reported that the situation in China was very serious and the Far East Command was asked to help. It was suggested that a British fighter squadron with volunteers from the R.A.F. might join the International Air Force, and possibly a bomber squadron as well. The British Chief of the Air Staff gave approval subject to Brooke-Popham's satisfaction that such squadrons would be able to operate effectively as part of the international force and that he accepted their detachment from the Malayan defences. Preliminary steps for the formation of the proposed squadrons were taken and vehicles, spare parts and bombs were moved to meet their needs, but by the first week in December the squadrons had not been formed.

In Burma Chennault's fighter squadrons were ready for action but they had no spares for the machines, except tyres brought by American Navy flying-boats from the Philippines. Bombers intended for the group were taken over by the United States Army Air Corps. Chennault declared later that Manning had an inadequate warning system, was failing to build adequate dispersal fields, and had committed his squadrons to "combat tactics that I regarded as suicidal". Manning, Chennault declared, refused to allow him to enter his fighter-control room.[6] The disadvantages in divided command, geographical separation and the shortage of men, aircraft and equipment were thus combining to produce difficulties and confusion.

When, in February 1941, Brooke-Popham visited Australia to confer with Government and Service representatives, the impression he gave to the War Cabinet was not as depressing as an examination of the restrictions imposed on his command might have suggested. He explained that the plans for the defence of Singapore, where the supreme need was for more munitions and more aircraft, were based on an assumption that it could hold out for six months until capital ships could arrive to relieve it. Before leaving England the British Prime Minister had instructed him that he was to hold Singapore until capital ships could be sent. Mr Churchill's assurance to him had been, "We will not let Singapore fall." Brooke-Popham said that he would be aided greatly if he were provided with a clear statement of policy concerning what actions by the Japanese would be regarded by the British Government as cause for war; he hoped the line could be drawn at the penetration of southern Thailand. The air defence of Malaya was being strengthened by 67 Brewster Buffalo fighters then being delivered from the United States. The Australian-built Wirraways, with which No. 21 R.A.A.F. Squadron was equipped, he described as "quite good machines for attacking ships over short distances", but added that naturally they were not the equal of the latest aircraft being produced.[7] Japanese aircraft, he thought, were not highly efficient and the Malayan air force would "put up a good show" against them. Though it would be unwise to emphasise it unduly, he said with mild caution, he did not regard the Japanese as air-minded, particularly against determined fighter opposition. They were not gaining air domination in China despite their overwhelming superiority in numbers. His air force would put up a much better show against the Japanese than against the Germans, and generally he thought the Malayan air force would cause such loss to the Japanese air force as to prevent it from putting the forces out of action either in Singapore or Malaya—clearly Chennault's high respect for Japanese airmen and aircraft was not shared by Brooke-Popham.

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[6] Chennault, p. 125.

[7] In his official despatch on the campaign dated 28th May 1942, Brooke-Popham declared that "the Wirraways could only be considered as training aircraft". His earlier opinion was in keeping with that of Air Chief Marshal Burnett.

The strength of the air forces in Malaya at this time was:

Bombers . .	2	squadrons	(Blenheim Mk I) . .	24	aircraft
Reconnaissance .	2	„	(Hudsons Mk II) R.A.A.F.	24	„
Torpedo bombers	2	„	(Vildebeestes) . . .	24	„
General purpose .	1	„	(Wirraways) R.A.A.F. .	12	„
Flying-boats .	1	„	(Singapores) . . .	4	„

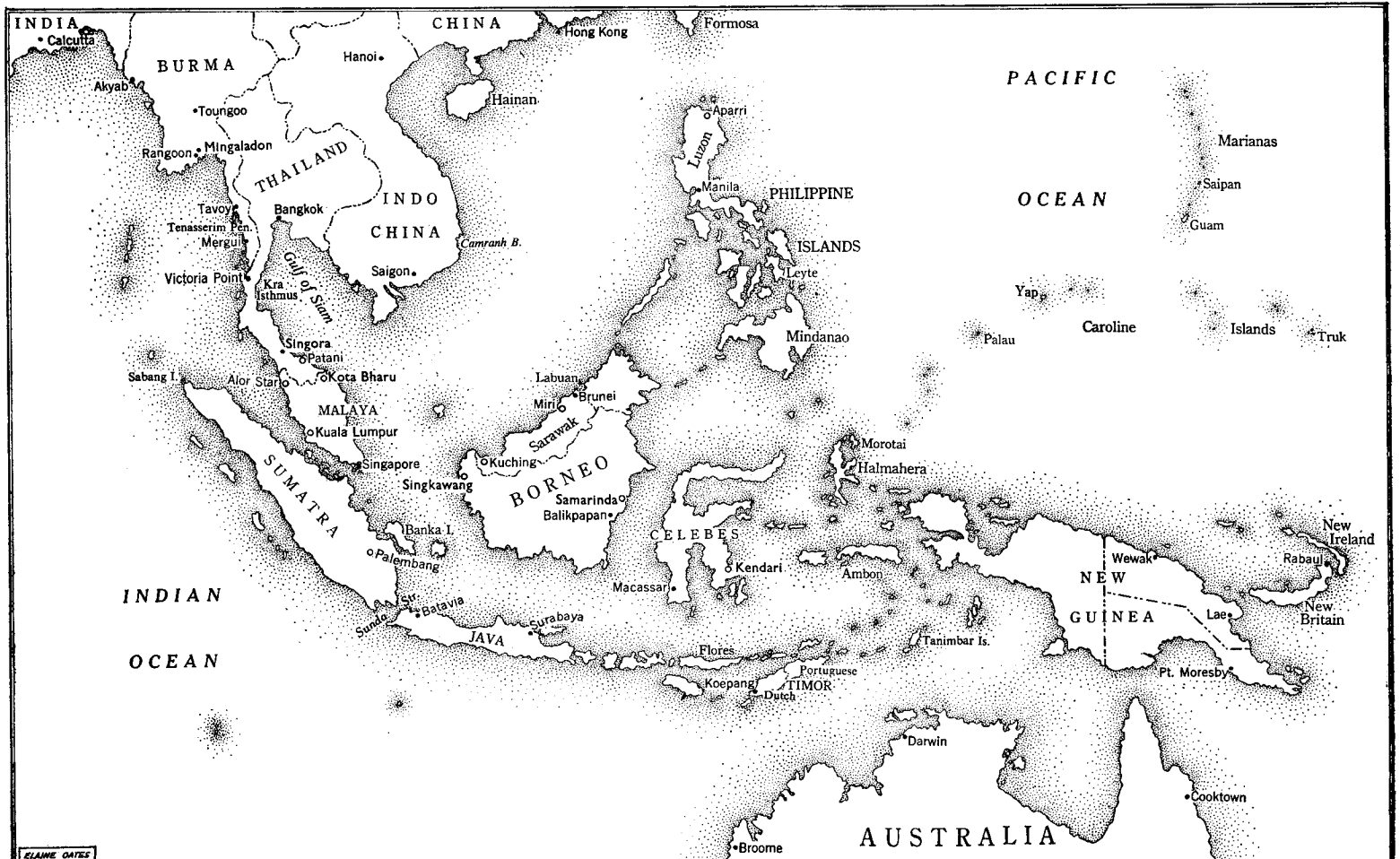
Of these only the Blenheims and the Hudsons could be considered modern and the Blenheims lacked range, a serious disability in this theatre. The Vildebeestes had been declared obsolete by the British Chiefs of Staff in August 1940, and Brooke-Popham said that he was looking to Australia, with its contract for the manufacture of Beauforts, for replacements.

The other side of this picture was provided by the information then available to the Australian Chiefs of Staff from which they estimated that Japan now had 340 carrier-borne aircraft and 650 aircraft which might be based on land—a total of 990 of which approximately 275 were fighters, 550 bombers and 150 reconnaissance aircraft.[8] The combined British and Dutch first-line strength consisted of 91 fighters, 300 bombers and 112 reconnaissance aircraft, a total of 503 of which some were obsolete and for which there were few reserves. The gross totals were regarded as giving an imperfect picture for it was held that unless the Japanese established shore bases they would have to rely on carrier or cruiser-borne aircraft.[9] At the same time it was recognised that reinforcement of R.A.F., R.A.A.F., R.N.Z.A.F. and Dutch units might be difficult because the various Services were equipped with different types of aircraft and required different stores, including bombs.

In February 1941 British, Dutch and Australian representatives conferred at Singapore, with United States representatives present as observers. This conference defined particular actions by Japan which would call for active military counter-action—a need which Brooke-Popham had emphasised when in Australia. It also suggested that the commanders "on the spot" should have authority to act without initial reference to London. Mutual reinforcement was planned and preparation of the administrative arrangements for this was to begin immediately. Except that they insisted that there could be no definition of an act of war and automatic reaction to

[8] At this time the Japanese naval order of battle as recorded by the Australian Chiefs of Staff included eight aircraft carriers built and two under construction. Japan's effective carrier strength in December 1941 was in fact nine. The British naval order of battle provided for one aircraft carrier (not then in the area) to be based on Trincomalee, Ceylon, in the event of war in the Far East. The United States Navy had four carriers—*Lexington, Saratoga, Enterprise* and *Yorktown*—based on Pearl Harbour.

[9] Subsequent knowledge has proved that this picture certainly was imperfect, but that its imperfection lay in a grave underestimation of the Japanese air strength. United States Strategic Bombing Survey—*Summary Report (Pacific War)* (1946), pp. 2-3, records that on 7th December 1941 the Japanese army air force had 1,375 aircraft and the navy air force 1,250, a total of 2,625 aircraft. The official American historians Craven and Cate (*The Army Air Forces in World War II*, Vol I, p. 80) state that at this time about 6,000 Japanese pilots had graduated from training units, 3,500 of whom were assigned to the navy and the remainder to the army. About 50 per cent of the army pilots had been in combat either in China or in the border fighting against the Soviet air force, while 10 per cent of the land-based navy pilots had been engaged in the China operations. About 600 of the best navy pilots were assigned to aircraft carrier units. Japanese pilots were receiving about 300 hours in training units before going to tactical units. The average first-line Japanese pilot in 1941 had about 600 flying hours and the average pilot in the carrier groups had more than 800 hours.



Far Eastern Theatre

it without reference to London, the British Chiefs of Staff approved the report of this conference.

Of special interest to the R.A.A.F. was a clause in this report which set out Australian preparations to reinforce the Dutch island of Ambon and Koepang in Dutch Timor with army and air force units from Darwin. Allied forces at Ambon were to be under Dutch control at the outset. The forces in Dutch Timor would come under Australian control on the arrival of their army units. The estimate of the Australian forces available in the Darwin-Ambon-Timor area was two bomber squadrons and two brigade groups, with possibly an additional reinforcing bomber squadron. In March the Australian War Cabinet approved the provision of these forces, noting that they would enable Australia to share in the "forward line" and so operate offensively. Considering the nature and extent of the Australian contribution, the War Cabinet thought it preferable that an Australian officer should be in command at Ambon. Additional commitments elsewhere made it necessary to reduce the army strength for this force from the two brigade groups recommended to about 1,200 troops for the defence of Ambon and the same number for Koepang. The R.A.A.F. units were not to be stationed permanently at Ambon and Koepang but advanced bases would be set up at these points and air force units at Darwin would operate from them. One of the squadrons was equipped with Wirraway aircraft which would restrict its range to the Darwin area until an intermediate landing ground had been established in the Tanimbar Islands. Because of political implications the movement of Australian troops to Ambon and Koepang was not to take place before the British Government had been consulted and until Australia was at war with Japan. But the War Cabinet did decide that in collaboration with the Dutch authorities in the East Indies, wireless telegraphy equipment, motor transport, general stores, bombs, aviation fuel and other supplies should be sent to Ambon and Koepang. The equipment and stores would bear Dutch markings and ostensibly would be on charge to the Netherlands East Indies forces.

In April 1941 a third Singapore conference was held, this time with American representatives joining British, Dutch, Australian, New Zealand and Indian members and with the British East Indies Station also represented. In the agreement which resulted—known as the A.D.B. Agreement —emphasis was placed on the needs of the Atlantic and European theatres and the necessity for reducing the needs of all others, and notably those of the Far East Command, to a minimum. The fate of Singapore would depend, it was contended, on the outcome of the struggle in the European theatre. The strategy for the Far East was basically defensive, but preparations for air operations against Japanese-occupied territory and against Japan herself from China and the Philippine Islands was recommended, as was the strengthening of the Philippine defences. The American reaction to this last recommendation was negative. The United States delegate reported later that he had discouraged British expectations in this direc-

tion, and in June the United States Army and Navy Chiefs sent a strongly worded statement to the British Military Mission in Washington declaring that the Philippine Islands would not be reinforced.[1]

The April Singapore conference also advocated provision of financial aid and equipment for China. Naval and air cooperation was planned, and the movement of the United States Asiatic Fleet from Manila to Singapore should the Philippines be attacked was proposed. "For the purposes of planning it was assumed that the Japanese would not be able to attack simultaneously at several widely dispersed places in the Far East and, in particular, that they would not challenge the combined British, American and Dutch might."[2]

Of outstanding importance was the American delegate's statement of the official American conception of the situation in the Far East. The leader of the Australian delegation,[3] Admiral Colvin, in his report on the conference submitted to the War Cabinet on 11th May, disclosed that the United States, regarding Europe and the Atlantic seaboard of North America as the vital war areas, considered that Singapore, though very important, was not absolutely vital. Its loss, while "most undesirable", could be accepted—a viewpoint not favoured by a British delegation which had engaged in high-level talks in Washington in March. The United States did not intend to reinforce its Asiatic Fleet, nor was it then expected that the United States forces in the Philippines would hold out very long against determined Japanese attacks.

Colvin also quoted the opinion of Brooke-Popham that reinforcements sent to Malaya since October 1940 had so materially strengthened the position of his forces that he was most optimistic about the ability of Singapore to hold out and continue to operate as a fleet base. From staff conversations in Washington had come a plan for the establishment of protected air bases along a line through Burma, Malaya, Borneo, the Philippine Islands, New Guinea, the Solomon Islands, the New Hebrides and Fiji, to Tonga. This line was to be supported by a second line from Sumatra through the Netherlands East Indies and the east coast of Australia to New Zealand. It was considered that the air and land forces available were below the "safe minimum" at this time, but to some extent the power to concentrate air forces quickly would compensate for lack of numbers. The movement of land forces was much more difficult.

Under the reinforcement plan prepared by the conference the Dutch Army Air Service would provide three squadrons of Glenn Martin bombers to be based at Sembawang and a fighter squadron of Buffaloes at Kallang.[4] Stocks of Dutch bombs were to be procured for their use. Singkawang and Samarinda in Dutch Borneo would be provided as bases for the four

[1] Watson, *Chief of Staff: Prewar Plans and Preparations*, p. 397.

[2] AVM Sir Paul Maltby, *Report on the Air Operations during the Campaigns in Malaya and the Netherlands East Indies from 8th December 1941 to 12th March 1942*, para. 8.

[3] The delegation comprised the CNS and 1st Naval Member, Admiral Sir Ragnar Colvin, Paymaster Capt J. B. Foley (naval staff officer), Col H. G. Rourke (army adviser), Gp Capt F. M. Bladin (air force adviser).

[4] A much earlier model than the versatile Glenn Martin Baltimore, successfully used in the Middle East and Italian theatres for close-support operations, sea reconnaissance and bombing.

R.A.F. bomber squadrons, the bases to be stocked with R.A.F. supplies. The only means of supplying these bases would be by transport aircraft to be provided by the Dutch who, for concealment, had deliberately avoided road-making in the dense jungle in which the bases were situated. Northern Sumatra, it was expected, would be required for an alternative air reinforcement route from India; the original route to Singapore, by way of Burma and north Malaya, was regarded as extremely vulnerable. Sumatra might also be required for landing fields for air operations against the flank of a Japanese force advancing down Malaya and the Dutch agreed to undertake airfield improvement in this territory.

Brooke-Popham wrote later that, in telegraphic comments on this agreement, he and the Commander-in-Chief, China (Vice-Admiral Layton), had emphasised particularly the great importance of offensive operations by the United States Fleet (a point which, he said, was deliberately omitted from the report of the British Chiefs of Staff) and the importance of strengthening the defences of Luzon in the Philippines.[5] The British Chiefs of Staff had replied that while they would welcome any strengthening of the Philippine defences other than at the expense of the United States' effort in the Atlantic, they were not prepared to press the point. Hong Kong they regarded as of little value as an advanced base for operations by American submarines and naval aircraft against Japanese sea communications. Apart from these points the Chiefs of Staff approved the A.D.B. report. But, although the United States representatives had signed it, the report raised objections in Washington because certain political matters, which do not concern us here, had been introduced. A second agreement, which placed these matters in an appendix, was prepared in London in August, but still Washington was dubious and a further conference on the issues to which America objected was proposed. Time was running out and this conference was never held. In May there was an interchange of visits between Darwin and Koepang and Ambon by units of the R.A.A.F. and the Netherlands Indies Air Force.

Australia's concern at the weakness of the defences in Brooke-Popham's command had been forcefully expressed, in the meantime, by Mr Menzies in London. On his return he reported to the War Cabinet (on 10th June) that the British Chiefs of Staff held out small hope that the aircraft strength proposed for Malaya would be achieved by the end of 1941. This had been disclosed in a paper prepared in reply to a memorandum from Menzies himself. An annexe to this paper contained a note by the British Air Staff on the proposed organisation of the R.A.A.F. which expressed general agreement with the Air Board's proposals. Choice of the same type of aircraft for general purpose and general reconnaissance squadrons was regarded as sound policy—a good bomber would be suitable for a striking force or for general reconnaissance work in which it could carry additional fuel in place of the bomb-load. A heavy bomber

[5] Air Chief Marshal Sir Robert Brooke-Popham, *Despatch on Operations in the Far East, from 17th October 1940 to 27th December 1941*, para. 45.

would be valuable but even medium bombers were difficult to acquire and provision of heavy bombers would be still more impracticable for at least two years unless unforeseen development brought the Far East theatre up to first priority. In view of the kind of attack Australia might expect, no strong case could be made on purely military grounds for the provision of fighter squadrons, though there might be psychological and other reasons for forming some squadrons of this type and, in any event, they would be valuable as reinforcements in the Far East where shore-based attack might have to be met.[6] The British Air Staff suggested that the Air Board "might wish to consider" the use of some Beauforts as torpedo bomber-general reconnaissance aircraft. Recent British successes in this form of attack had prompted the torpedo-bombing suggestion, but a warning was added that the introduction of the torpedo would impose new supply, maintenance and training problems at a time when there was a scarcity both of trained men and torpedoes in the European and Mediterranean theatres. For these reasons Britain would not be able to afford much aid in such development for some time to come.

In his memorandum to the British chiefs, Mr Menzies had emphasised that Australian cooperation in the provision of naval, military and air forces for overseas service was "entirely dependent on the sense of local security in the public mind". The Australian Government could not guarantee a reassuring outlook, he asserted, unless the strength of the forces for local defence was at the level recommended by his Government's advisers. Nor could the Commonwealth's war effort be sustained unless trade—a large part of which was seaborne and so required naval and air protection—was maintained at a level that enabled it to be paid for. The present strength of the Australian air force was inadequate for this level of protection.

On the specific issue of Malayan defence Menzies was told in London that, with the exception of anti-aircraft and anti-tank guns, small arms, and artillery ammunition, the deficiencies in army equipment were not serious. Concerning the air defence position and probable Japanese strength and efficiency, the report of the British chiefs which Menzies brought back contained much the same optimism noticed in Brooke-Popham's report to the Australian War Cabinet in February.

> The majority of the 450 shore-based aircraft which the Japanese can marshal against us[7] (the report stated) are of obsolete types . . . and we have no reason to believe that Japanese standards are even comparable with those of the Italians. . . . We fully realise that our air strength in the Far East is below that necessary for reasonable security in the absence of a fleet, but we do not consider that, in the present situation, we are running more serious risks there than elsewhere, though we are making every effort to restore the balance at the earliest possible moment.

[6] This single-purpose conception of the use of fighter aircraft suggests that the British Air Staff either were thinking in very immediate terms and without any comprehension of the RAAF becoming a fully coordinated air force, or that they did not recognise at this time the value of fighter aircraft as escorts for bomber formations, though the Japanese had learned the lesson at considerable cost as early as September 1937.

[7] Note the comparison of this figure with that quoted by the Australian Chiefs of Staff in February—450 land-based aircraft as against 650.

But this optimistic though carefully qualified statement had not satisfied Menzies who had asked whether Hurricanes could be made available for Malayan defence. He was told that apart from the need to standardise types to simplify maintenance and the supply of spares, Hurricanes could be provided only at the expense of the Middle East, where even replacement of wastage was extending Britain's efforts. It was most important to obtain all the aircraft possible from the United States and the Brewster Buffalo "appeared to be eminently satisfactory", and would probably prove more than a match for any Japanese aircraft. Menzies told the War Cabinet further that since the Chiefs of Staff had prepared their paper the British Government had stated (on 22nd May):

> We have an interest in any move likely to prejudice the security of the line which runs from Malaya to New Zealand through the Netherlands East Indies and we agree that any attack on any part of that line equally affects all parties and must be dealt with as an attack on the whole line.

On the assumption that the Japanese established themselves in the Netherlands East Indies the British Chiefs considered that "the threat of direct air attack on Australia would not be a serious one". Assuming that other commitments remained unchanged, the Japanese total of about 450 aircraft (150 fighters, 150 light bombers and 150 heavy bombers) for operations based on the Netherlands East Indies, would leave no aircraft for attacks on British territory from Thailand. The existence of only one aerodrome within range of Australia with facilities for heavy bomber operations (Kendari in Celebes) would limit the scale of attack on Australia to a maximum of between forty and fifty aircraft operating at extreme range over the Timor Sea—a scale of attack which in practice would probably be negligible and limited to the immediate vicinity of Darwin.

Summing up, Menzies said that the British Chiefs of Staff had shown a degree of complacency about the defence of the Pacific region. It was evident, he said, that "for too long we readily accepted the general assurances about the defence of this area".[8] It had been only at the Singapore

[8] Without attempting to judge the wider issue, which does not concern us here, it is noteworthy that Mr Churchill has since made it clear that, at this time, the Chief of the Imperial General Staff, General Sir John Dill, definitely placed Singapore before Egypt in British strategy and that Churchill was in strong disagreement with him. In a paper dated 6th May 1941 the CIGS wrote: "It is the United Kingdom and not Egypt that is vital. . . . Egypt is not even second in order of priority for it has been an accepted principle in our strategy that, in the last resort, the security of Singapore comes before that of Egypt. Yet the defences of Singapore are still considerably below standard." In a sharp counter to this in which he said the Cabinet and the Navy and Air Chiefs of Staff supported him, Churchill (13th May 1941) wrote to Dill: "The defence of Singapore is an operation requiring only a very small fraction of the troops required to defend the Nile Valley against the Germans and Italians. I have already given you the political data upon which the military arrangements for the defence of Singapore should be based, namely, that should Japan enter the war the United States will in all probability come in on our side; and in any case Japan would not be likely to besiege Singapore at the outset, as this would be an operation far more dangerous to her and less harmful to us than spreading her cruisers and battle-cruisers on the Eastern trade routes." In recording this reply Churchill remarks that at this time the Japanese were not established in Indo-China, adding later, "Nevertheless the confidence which we felt about Home Defence did not extend to the Far East should Japan make war upon us. These anxieties also disturbed Sir John Dill. I retained the impression that Singapore had priority in his mind over Cairo. This was indeed a tragic issue, like having to choose whether your son or your daughter should be killed. For my part I did not believe that anything that might happen in Malaya could amount to a fifth part of the loss of Egypt, the Suez Canal, and the Middle East. I would not tolerate the idea of abandoning the struggle for Egypt, and was resigned to pay whatever forfeits were exacted in Malaya. This view also was shared by my colleagues." W. S. Churchill, *The Second World War*, Vol III (1950), pp. 375-79.

conference in October 1940 that the Australian representatives had discovered the weakness of the local defence position in Malaya and it had been "only recently" that the real situation relating to a fleet for the Far East had become apparent.[9] Other theatres were not devoid of both air and naval protection as the Far East theatre would be in war with Japan should a redisposition not be made. While in London Menzies had obtained an assurance that should war occur in the Far East, there would be an immediate review of air resources to determine what redisposition might be made to meet the danger on all fronts.

While the Australian Prime Minister and his War Cabinet and the Chiefs of Staff were searchingly examining the Far East situation, Air Vice-Marshal Pulford,[1] who succeeded Air Vice-Marshal Babington on 24th April 1941 as Air Officer Commanding Far East Command, was taking stock of the organisation and administrative background to his new headquarters. What he found was far from encouraging. Despite a severe shortage of staff officers Air Headquarters retained all administrative and operational control. This authority was exercised through subordinate formations. In an effort to decentralise control, a group headquarters was established on the mainland and certain powers were delegated to it. But in the opinion of some officers the powers actually delegated were too narrow and the result was a tendency for Air Headquarters to by-pass group headquarters in an emergency and thus create confusion.

On the next step down in the chain of command were the station headquarters, formed on established aerodromes where one or more squadrons or other units were based. These headquarters were responsible for local air force administration which included messing, accommodation, maintenance and servicing facilities, communications and the immediate operational control of their respective units, plus airfield defence, demolition and emergency movement. Thus a squadron was extremely dependent on the efficiency of the station organisation and control. One of the most vital factors in the whole command organisation was the insistence that all operations, other than for fighter squadrons, must be ordered and controlled from Command Operations Room at Air Headquarters on Singapore Island. Normally the station operations room came into the chain of command, but this did not reduce the grave danger of Air Headquarters becoming too deeply concerned in detail, thereby stripping the station commander of scope for initiative and turning him into little more than a "speaking tube" for the transmission of orders. For fighter operations Fighter Control Headquarters gave orders through station headquarters except where, on the mainland of Malaya, group headquarters exercised

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[9] From London Menzies had advised the War Cabinet in March that it would be unwise for Australia to be deluded about the immediate dispatch of a fleet of capital ships to Singapore. It would be far better, he said, to face the facts and prepare a definite plan of naval reinforcement east of Suez on a progressive basis according to the probable outcome of events in the Mediterranean and he had asked that this be done.

[1] AVM C. W. H. Pulford, CB, OBE, AFC. (HMS *Ark Royal*, Gallipoli 1915; comd 1 Sqn 1917-18, 201 Sqn 1918.) AOC 20 Gp 1940-41; AOC RAF Far East 1941-42. Regular air force officer; of London; b. Agra, India, 26 Jan 1892. Died while marooned on Tjebier Island, near Sumatra, about 10th March 1942.

control, so that the long distances and the vulnerability of communications might be offset.

Communications channels in the command comprised the telephone, teleprinter, wireless-telegraphy and radio-telephone. The security of the general telephone system, which passed through civil exchanges, was doubtful to say the least; lack of alternative or emergency lines made the system extremely vulnerable. The internal service telephone system, adequate on Singapore Island, was so poor on the mainland, where there was no efficient field signals service for repair and maintenance, that organisation was hampered and station and unit efficiency and safety impaired if not endangered. Teleprinters were too few in number and, like the telephones, depended on vulnerable land cables. Wireless-telegraphy channels were inadequate; they were liable to enemy interception and jamming and, where used for ground-to-air communications, were too often linked with other frequencies and therefore unreliable. Radio-telephone equipment was obsolete and of very limited range.

Under the severe restrictions understandably imposed by the British Chiefs of Staff, the 336 aircraft considered sufficient for a "fair degree of security" for his command, were regarded by the Commander-in-Chief, also quite understandably, as "an irreducible minimum". As he saw it the problem of defence in the Far East was fundamentally a naval one. Although the army and the air force might defend areas of land and repel the enemy, his final defeat could not be brought about without control of sea communications. But this control called for air superiority.

One of the disabilities Brooke-Popham had to contend with was the lack of adequate Intelligence. The Far Eastern Combined Bureau on which he relied was not a combined service Intelligence centre in the true sense of the words. Under the administrative control of the Admiralty and with a naval officer at its head, it gave army and air Intelligence a minor place and air Intelligence in particular was inadequate. Though this defect was to some extent corrected later, Brooke-Popham had recorded his opinion that a "really suitable" head for the bureau had not been found even by December 1941.[2] Air Vice-Marshal Maltby,[3] who later became assistant air officer commanding Far East Command, in his despatch on the air campaign in Malaya, wrote that the nucleus of a command air Intelligence organisation was "fortunately in being" by this time, but "its development was backward and in particular the information it had collated for briefing aircrews was scanty". He added that the system for collecting Intelligence throughout the Far East was only sufficient to enable the bureau to obtain incomplete air information, the reliability of most

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[2] In November 1940 on their way to Singapore, members of Brooke-Popham's staff visited the Middle East Intelligence Centre in Cairo where they sought and were given data on the organisation and methods of that centre which had been established in July 1939 as the first organisation of its kind under one head. It provided the C-in-C in the Middle East with strategic, political, economic and operational Intelligence.

[3] AVM Sir Paul Maltby, KBE, CB, DSO, AFC, RAF. (1915-19: RFC.) AOC 24 Training Gp 1938-40, 71 Army Cooperation Gp 1940-41; Asst AOC RAF Far East Cd and AOC RAF in Java, 1942. Regular air force offr; b. 5 Aug 1892.

of which was "far from high". Training of squadrons in fighter tactics was affected by lack of knowledge of Japanese fighter squadrons and their aircraft. Estimation of the Japanese Naval Air Force was high; information on the Japanese Army Air Forces reported that "although the numbers were great and they were known to possess long-range fighters, efficiency was low, and that, despite their fanatical bravery, reasonable opposition would turn them from their target".

In the opinion of R.A.A.F. officers serving in Malaya, Maltby's criticism of the Intelligence service was more than justified, particularly in relation to the briefing of aircrews. Not only was essential information on enemy armament and aircraft performance lacking, but methods of aircrew interrogation were inadequate; too few Intelligence officers were available, and those so engaged were mostly untrained or inexperienced. In the reorganisation of the Intelligence service, which was taking place at the end of 1941, R.A.A.F. methods were being used as a basis.

Recognising that the main reason for the defence of Malaya was to preserve the naval base at Singapore, Brooke-Popham therefore judged it to be highly important that enemy aircraft should be kept as far away from this base as possible, which meant extending the defences to the northern extremity of Malaya. This extension, he noted, was not dictated by a policy of defence by air power; had the policy been defence by land forces, the dispositions themselves might have been different "but it still would have been essential to hold the greater part of Malaya to deny aerodromes or their possible sites to the enemy". Airfield policy therefore called, first, for sufficient airfields to enable a large proportion of air strength to be concentrated in any given area, and, second, for the selection of sites as far forward as possible to give the greatest possible range for both reconnaissance and offensive strikes; and there was obvious value in being able to strike more than once at enemy convoys before they had time to reach the coast.

The organisation as it was when the R.A.A.F. squadrons began to take part in seaward reconnaissance was but a pale shadow of the Commander-in-Chief's full objectives. Nos. 1 and 8 Squadrons R.A.A.F. both arrived in Malaya well trained and equipped for reconnaissance work. They had been actively engaged in trade protection off the Australian coast and they expected to find in Malaya an organisation from which they would learn a great deal more. They were disappointed. The only evidence of a "search and patrol" system, for example, was a small photographic representation of standard searches which was quite inadequate for practical operations. The signals organisation was poor, the operating and procedure standard was low and there was no efficient direction-finding system. Under the system of organisation adopted, station headquarters had little opportunity to gain practical experience. Severe restrictions on flying hours also checked initiative in station and squadron commanders who, to gain some opportunity for exercises, engaged in what were termed "tarmac patrols" in which station wireless-telegraph frequencies were used and the aircraft

with their crews in them "operated" on the ground; and in supplementary naval reconnaissance courses in which models and silhouettes were used and great emphasis was placed on the recognition of Japanese vessels.

The working hours at Seletar and Sembawang were 7.30 a.m. to 12.30 p.m. Both No. 21 Squadron at Seletar and Nos. 1 and 8 at Sembawang soon began working a further two hours—from 2 to 4 p.m.

The background for the use of such squadrons depended greatly, of course, on the aerodrome organisation throughout Malaya. The clash of opinion between the army and the air force on the siting of Malayan airfields dated back to pre-war years. Until 1937 the army's policy in Malaya had always been to leave the east coast of the peninsula as undeveloped as possible—as a deterrent to enemy troop movements—because it had insufficient forces to defend the long coastline. Even late in 1941 this policy still exerted an influence in determining what could be accomplished in a given, brief period. But now the Commander-in-Chief was pressing hard for development of east coast defences and emphasising the strategic and tactical importance of the eastern half of the peninsula. A physical reason for this was the rugged, heavily-forested mountain spine running down the centre of the peninsula for the greater part of its length. The rainfall increases as the central range is approached from either the east or the west and heavy cloud over the mountains creates a considerable and constant flying hazard; a hazard which, with the aircraft then possessed by the command, made airfields in the west virtually ineffective as bases for vital seaward operations to the east.

Key points on the eastern coast were: Mersing in the south; Kuantan, roughly half way between Singapore and the Thai frontier and, farther north, Kota Bharu in Kelantan, no great distance from the Malaya-Thailand boundary. Kota Bharu airfield with its two satellites a few miles to the south was important as a base from which to strike as far into the Gulf of Siam and into Indo-China as aircraft range would allow. But the only ground supply link was a railway, obviously vulnerable, as was the only ground link with Kuantan—a single road. The tactical weakness of these airfields close to the coast presented a very real problem for the army. Should the enemy decide, as could be expected, to make a thrust southward in western Malaya, the field army must detach considerable forces for their defence. Explaining this later in his despatch Maltby recalled that the troops so disposed were Indian State troops who had had little training in this highly specialised work and who were severely handicapped by shortage of weapons, particularly anti-aircraft guns.[4]

[4] General Percival held similar views on having forward airfields on the east coast. He wrote later: ". . . it was obvious that the protection of these aerodromes was going to be a commitment which the army at its existing strength could not possibly undertake satisfactorily. The danger of constructing aerodromes in an area where the defence forces might not be strong enough to prevent them falling into the hands of the enemy was also obvious. . . . The solution of the problem, as I saw it, depended mainly on the probability or otherwise of there being sufficient modern aircraft on the spot when the time came for them to go into action to deal the enemy such a shattering blow that he would only be able to land a small proportion of his invasion forces. If this was not likely to happen, then it would be much better to construct the aerodromes farther inland where it would be easier for the army to defend them and infinitely more difficult for an enemy, even if he succeeded in landing, to capture them." A. E. Percival, *The War in Malaya* (1949), pp. 42-3.

In the latter part of 1941, Air Headquarters was seeking reinforcements for administrative and special duties officers in both Australia and New Zealand.[5] Eventually more than 116 officers in this category were drawn from Australia for service with Far East Command. After only a brief disciplinary course and a hurried survey of their prospective duties these officers were put to work on a great variety of tasks and, inevitably, quite often with a rank far from commensurate with their responsibilities. Maltby, in his report, stated that the work of the headquarters was increased by the inexperience of officers at stations who needed more "nursing" than was normally required. Responsible Australian officers have since admitted that some of the men selected for these administrative posts were quite unsuitable—perhaps it would have been surprising if, in the circumstances, this had not been so. One R.A.F. commanding officer supported his refusal to recommend Australian administrative officers for promotion with a memorandum, the main contents of which, although confidential, seemed to become fairly widely known among Australians. Members of the R.A.A.F. certainly found it difficult to gain promotion and there were instances of men holding acting rank as high as that of squadron leader while continuing to draw the pay of a flying officer. On the other hand, in the experience of some Australians concerned, the confused situation in the command suggested a need not so much for "nursing" as for freedom from the restrictions of a time-wasting adherence to peacetime administration. An officer in this category was Flight Lieutenant Burlinson,[6] who enlisted in Australia and, soon after his arrival in Singapore in June 1941, was appointed Group Defence Officer. Burlinson recorded his early reactions thus:

> After a week of studying files it became apparent that the four stations on Singapore Island—Seletar, Tengah, Sembawang and Kallang—were defended on the old principles of the "thin red line"; as a friend said, "very thin and not much of a line". One clause in the orders for the defence of each of these stations appeared in identical words in each set of orders. This clause referred to the Mobile Relief Column which was to rush to the aid of the station garrison in the event of pressing need. This force was referred to in such general terms and inconclusive detail that it was obvious that there was a nigger somewhere in the woodpile. . . . Major Peel Thompson[7] of the Manchesters . . . General Staff Officer II, Headquarters, Singapore Fortress . . . gave me all the help it was in his power to give.[8] . . . When I had outlined my question [about the relief column] he smiled and said, "My friend, you have been reading the papers, you have entirely the wrong idea of the defence of Singapore." [Thompson then showed Burlinson a map of the disposition of all troops on Singapore Island.] . . . Somewhere inland from

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[5] Advertisements appeared in the Australian and New Zealand press calling for men aged between 32 and 50 years with executive experience to join the RAF for service with the Far East Command. Almost 6,000 applications were received from the two Dominions.

[6] Sqn Ldr G. R. F. Burlinson, RAFVR, 109314. Admin duties RAF Stn Kallang and AHQ FEAF (RAF) 1941; aerodrome defence duties ACSEA 1942-43; RAF Regt duties 1943-45. Business manager; of Sydney; b. Dunedin, NZ, 12 Oct 1899.

[7] Major Peile Thompson. 1 Manchester Regt; GSO2 HQ Singapore Fortress 1941. Regular soldier; b. 28 Feb 1911.

[8] By this time Burlinson, though still a pilot officer, had been appointed Command Defence Officer.

Singapore was a little cluster of four pins. Pointing to these the GSO II said, "Here, my friend, you have the whole of the reserve of which you spoke—of four platoon strength. It is NOT mobile and has seventeen different roles to perform."

To Burlinson the R.A.F. administration system seemed capable of "amazing efficiency in times of peace, coolness and plenty of time". Its lack of adaptability to high-speed work in an emergency was also immediately obvious. In July 1941, still holding the probationary rank of pilot officer, he was sent on a tour of inspection in the course of which he visited all the airfields in Malaya. On arrival at the northernmost airfield, Kota Bharu, he was taken to meet Brigadier Key,[9] who was charged with its defence. Key had three battalions of infantry dispersed along 45 miles of frontier and 40 miles of coastline. The R.A.F. station was less than a mile and a half from the coast. As the artillery available consisted of one serviceable field gun, it was obvious that so far as army defences were concerned, enemy destroyers might lie off shore and shell either Kota Bharu or Gong Kedah (where a new airfield had been constructed 30 miles to the south) without risk. Asked by Burlinson whether he could guarantee that these two airfields could be maintained in service in the face of an enemy attack with one full division, the brigadier replied that he could give no such guarantee and that, anyway, the enemy naval escort could render both airfields untenable without any troops landing. Burlinson returned to Singapore and wrote a special report to Pulford who sent a letter to the General Officer Commanding the Army in Malaya (Lieut-General Percival[1]) enclosing a copy of the report. Some days later Pulford showed Burlinson the reply he had received from Percival. Of this Burlinson wrote later that it "made no attempt to deal with the detailed dispositions which showed the weakness of the defences in the Kota Bharu area, but merely said that the General was satisfied with the dispositions and that in any case he was not accustomed to receiving critical reports signed only by a second lieutenant".

Burlinson was only one of the Australian professional or business men of some standing at home who, now administrative officers serving in Malaya, felt disturbed by what they regarded as complacency and inefficiency. Another was Flight Lieutenant Bulcock[2] who graduated in Malaya as an equipment officer,[3] and who has recorded his impressions in, at times, bitter phrasing. Of Seletar, R.A.F. station and maintenance unit on the eastern side of Singapore Island, facing Johore Strait, he wrote:

Its immensity was staggering to those seeing it for the first time—palatial messes, barracks, tennis courts, squash courts, football fields, swimming pool, golf course,

[9] Maj-Gen B. W. Key, CB, DSO, MC. Comd 8 Ind Inf Bde 1940-42; GOC 11 Ind Div Jan-Feb 1942. Regular soldier; b. 19 Dec 1895.

[1] Lt-Gen A. E. Percival, CB, DSO, OBE, MC. GOC 43 Div 1940, 44 Div 1940-41, Malaya 1941-42. Regular soldier; b. Aspenden, Herts, Eng, 26 Dec 1887.

[2] F-Lt R. P. Bulcock, RAFVR, 109313. Equipment Offr, RAF Stns Kallang, Kuantan and 153 MU 1941-42; Embarkation Officer, Tjilatjap, Jan-Mar 1942. Master printer and managing director; of Brisbane; b. Brisbane, 3 June 1904.

[3] "Most of us passed with credit and the few who failed were given an honorary but dishonourable sixty per cent so that the instructor could hurry back to India." Roy Bulcock, *Of Death But Once* (1947), p. 21.

picture show and yacht club—all situated within the seven-mile steel boundary fence enclosing the aerodrome. . . . The forms which formed the R.A.F. accounting system had been drawn up, many in quintuplicate, from a pattern used by Selfridges in London and we had to learn the use of a sufficient percentage of them to make our work fireproof. . . . For a peacetime system it was undoubtedly a perfect method of preventing loss or pilfering, but how would it work in war? The answer was that it didn't. The whole scheme was immediately curtailed by about two-thirds of the work involved as soon as operations commenced.[4]

In contrast to this picture was the feverish work going on on the mainland and particularly at the northern stations against almost impossible odds. Posted to R.A.F. Station Kuantan, Bulcock found that:

Nearly all the buildings had been completed and stood out like a fire on the ocean, for that excellent camouflage the rubber trees had been ruthlessly shorn away. This may have been to combat the mosquito menace, but the army camp of 2,000 Indians half a mile away was completely hidden by rubber trees . . . making the camp quite invisible from the air even at 500 feet. . . . The C.O. and the adjutant were the only officers there [when Bulcock arrived] together with four O.Rs. . . . More personnel were to arrive shortly and 36 Squadron of Vildebeestes was flying in to complete a fortnight's course of armament training and bombing practice. . . . There was no equipment . . . excepting a certain amount of barrack furniture and my first job was to requisition all the thousand-and-one items necessary to equip an R.A.F. aerodrome, workshops, bombing range and marine base.[5]

Bulcock, then a pilot officer, was appointed Transport Officer and acted as Engineering Officer, Workshops Officer, Embarkation Officer, and Rations and Messing Officer; he supervised the refuelling of aircraft, the building of new petrol dumps and shelter-sheds and the storage of bombs and torpedoes. As time went on, he has recorded, Kuantan station did acquire tons of bombs, torpedoes and petrol, though with a strength in men now approaching 600, it had barrack equipment for only 300. To demands sent to headquarters the reply was that the station was already fully equipped. Repairs to aircraft and engines were needed but there were no tools. Aircraft engines had to be repaired in Singapore, transport being by sea with only one ship a week, though a maintenance unit at Kuala Lumpur could be reached by road in one day. Here Bulcock enlisted the aid of another Australian, Wing Commander Groom.[6] Conditions at Kuala Lumpur were immensely superior to those at Kuantan—the next engine for maintenance from Kuantan went to Kuala Lumpur and a replacement engine came back by road on the following day and at least two weeks were saved. In reply to "dozens of letters" Air Headquarters eventually promised that a senior officer would investigate the situation at Kuantan. A group captain did come; his visit ended in Bulcock being asked to put all his "troubles" in writing.[7]

On the other mainland stations, too, officers and airmen wrestled with the problems of airfield construction—shortages of material, particularly

[4] Bulcock, pp. 18-19.

[5] Bulcock, p. 24.

[6] Gp Capt A. D. Groom, DSO, 37075, RAF. 13 and 4 MU's, ACSEA, 1940-41; 153 MU, ME, 1943. Regular air force offr; of Brisbane; b. Toowong, Qld, 9 Sep 1913.

[7] Bulcock, pp. 24-30.

metalling for runway surfaces—and of securing labour. Sixteen new bases had been listed for construction in remote secondary jungle country. Five of the existing bases had to be brought up to modern standards and two needed reconstruction. No. 1 Aerodrome Construction Squadron R.N.Z.A.F. which arrived from New Zealand in August, September and October 1941 did splendid work but by the beginning of December much of the works program remained unfinished.[8]

Air Headquarters was endeavouring to develop an improved radar system for use by an Observer Corps, which was being built up on the inadequate organisation that existed when Brooke-Popham took command, and Fighter Control Headquarters was to direct this system. By 1st December only six of the proposed 20 radar stations had been completed and these were all in the vicinity of Singapore Island.

Aircraft dispersal areas and "splinter-proof" pens were planned on what was considered an adequate scale—one in keeping with the estimated scale of the Japanese attack. Neither time nor resources were sufficient for the establishment of an adequate fighter defence and few anti-aircraft guns were available.[9]

Early in the period of his command Brooke-Popham realised that relations between the army and the air force were not happy. Jealousy, he has recorded, hindered cooperation, and it was some months before this was corrected. Progress in this respect was achieved by getting the headquarters of the two Services on to the same site with a single combined operations room. Between the air force and the navy relations were good and between the navy and the army they continually improved.

In the far north, just across the Thai frontier, the central mountain spine ends, and there, in the region of Singora on the east coast of the Kra Isthmus, the terrain was suitable for airfields. Inland the Haad Yai railway junction was an important factor and Brooke-Popham's headquarters planned accordingly. On 11th August Headquarters No. 223 Group had been formed at Kuala Lumpur. The basic operational plan at that stage provided that if the Japanese made a positive move to occupy Thailand a British brigade would move across the border to occupy Singora. The air force was to provide direct and, if necessary, close support for this operation, a task in which No. 21 Squadron was to be given a share. But on 14th October this plan was cancelled in favour of a more extensive one known as MATADOR. This provided for the movement of part of the III Indian Corps across the border to forestall the Japanese. Direct and, if necessary, close support and reconnaissance facilities were to be provided by the air force and again No. 21 Squadron was allotted a task from its base at Sungei Patani. Headquarters No. 223 Group, now known as "Norgroup", was to be re-formed at the Headquarters of III Indian Corps

[8] A full account of the work of this squadron is given by J. M. Ross, *Royal New Zealand Air Force* (1955), a volume in the series *Official History of New Zealand in the Second World War 1939-45*, pp. 97-105.

[9] The C-in-C had laid it down that each aerodrome was to have 8 heavy and 8 light AA guns, a scale that was not reached by any single aerodrome and some had no guns at all.—Maltby Despatch, para. 29.

in Kuala Lumpur on 24th November and was to control the operations of the squadrons concerned. A start of at least 24 hours over the Japanese would be essential to this operation. Doubt about the reaction of the Thais made the planning complex, but it was proceeded with and efforts were made to preserve secrecy.

In the Malayan air defences one of the greatest weaknesses was lack of fighter aircraft and of reserves of aircraft of any kind. The arrival of Brewster Buffalo fighters from the United States in February 1941 had eased the first problem somewhat but inadequacy of reserves still caused a reduction in the number of flying hours that squadrons were permitted. Altogether 167 Buffaloes were received and by the end of May the formation of four squadrons armed with these aircraft had been authorised. One of these units was No. 453 Squadron, the fourth squadron to be contributed by Australia to the Far East Command. On reaching Singapore by sea from Australia in August 1941 it joined the two R.A.A.F. squadrons (Nos. 8 and 21) at Sembawang[1] where Group Captain McCauley,[2] who took command there in August, was engrossed in the task of organising his station and contributing to the welfare of the R.A.A.F. throughout Malaya. No. 453 Squadron was the first "infiltration" or *Article XV* squadron to go into service in this theatre. On arrival it was formally established as a unit in the Far East Command with Squadron Leader Allshorn[4] as commanding officer; in October a R.A.F. officer, Squadron Leader Harper,[5] arrived from England to take command. All the aircrew (with the exception of Harper) and practically all the ground staff of No. 453, were Australians and wore R.A.A.F. uniform. Operational training, begun promptly, was advanced as rapidly as possible so that barely three months after its arrival, and though not yet regarded as having reached the accepted standard for R.A.F. operational fighter squadrons, Pulford tested it for efficiency and, on 19th November, granted it operational status.

Meanwhile Nos. 8 and 21 Squadrons had also been experiencing changes. In February 1941 Wing Commander Wright was appointed to succeed Wing Commander Heffernan (who returned to an appointment in Australia) in command of No. 8 Squadron and also became commander of R.A.F. Station Kota Bharu. Squadron Leader Fyfe[6] then took command of No. 21 which continued to operate with Wirraways though the need to replace these with more modern machines was becoming

[1] No. 1 Squadron, in keeping with a plan that the general reconnaissance units should exchange stations every six months, had recently moved to Kota Bharu.

[2] Air Marshal Sir John McCauley, KBE, CB. Comd RAAF Far East and RAF Stn Sembawang 1941-42; Deputy Chief of the Air Staff 1942-44; Air Cmdre (Operations) 2nd TAF ETO 1944-45; Chief of Staff BCOF 1947-49; AOC Eastern Area 1949-54; Chief of the Air Staff 1954-57. Regular air force offr; of Sydney; b. Sydney, 18 Apr 1899.

[4] W Cdr W. F. Allshorn, 165. Comd 453 Sqn 1941, 21 Sqn 1941-42, 4 Sqn 1942-43, 74 Wing HQ 1943, 83 Sqn 1943-44. Regular air force offr; of Camden, NSW; b. Randwick, NSW, 20 Apr 1913.

[5] W Cdr W. J. Harper, RAF, 40110. Comd 453 Sqn 1941-42, 135 Sqn, RAF, 1942, 92 Sqn, RAF, 1943, University of Leeds Sqn 1943-44. Regular air force offr; b. Calcutta, 22 July 1916.

[6] Gp Capt E. G. Fyfe, DSO, 114. Comd 21 Sqn 1941, 5 FSHQ and RAAF Stn Batchelor 1942, 4 OTU 1942-43, 77 Wing HQ 1943-44. Regular air force offr; of Melbourne; b. Elsternwick, Vic, 20 Mar 1914.

urgent. The probability of obtaining new aircraft seemed slender but the Australian Government sent a direct request to Brooke-Popham that he should do everything possible to secure them for the squadron; Buffaloes were the only answer and in September 18 of these aircraft were listed for delivery to it. In the same month a temporary advanced flying training unit was formed at Kluang in central-southern Malaya in an endeavour to meet the training needs of Australian and New Zealand pilots who were arriving direct from flying training schools. More than four months of training was required before such airmen could be expected to be ready for operational flying. To help in the establishment of this unit five of No. 21 Squadron's most experienced pilots and six of its Wirraways were transferred to it.[7] The squadron was handicapped also by a decision of Air Headquarters, made simultaneously, that it should change its role from general reconnaissance and become a fighter and army cooperation squadron. Not all the pilots were readily adaptable to the change—they had not been selected as fighter pilots in the first place and inevitably some were now unsuitable. Another difficulty arose from the posting back to Australia of tour-expired pilots,[8] whose services could ill be spared. Allshorn took command of No. 21 in October.

So far as army cooperation was concerned such exercises as could be undertaken in Malaya were not up to the standard demanded by the latest developments in Europe and the Middle East. Through lack of staff it was not possible to develop the lessons from other war theatres in an adequate way. In an effort to overcome this weakness in inter-Service cooperation instructions were issued for the joint information of army and air force units. These related to bombing operations in close support of ground operations and the development of tactical reconnaissance by fighter aircraft. Classes for training aircrews in army organisation and tactics were arranged but lack of signals equipment severely restricted this. A unit could scarcely have been subjected to more frequent or more hampering interruptions to its crucial operational training, yet on 19th November, the day on which No. 453 Squadron had "graduated", Pulford also tested No. 21 and certified to its operational efficiency. The fact that there were now four Buffalo squadrons placed a very heavy strain on the command's reserves of this aircraft. These units also were at a disadvantage because all had been formed as Buffalo squadrons in Malaya and lacked a leavening of combat-experienced pilots.

The two R.A.A.F. Hudson squadrons, whose primary task was seaward-reconnaissance and attack on enemy seaborne forces, with operations as light bombers as a secondary role, had now been in Malaya long enough to be regarded as "seasoned". They were heading the lists in the various phases of training, particularly in bombing-up, navigation and bombing.

[7] F-Lt R. A. Kirkman, and F-Os C. R. McKenny, D. M. Sproule, A. M. White, and H. V. Montefiore. They were not graded as flying instructors but were experienced Wirraway pilots who could fly the aircraft efficiently from either front or rear seat.

[8] The length of the operational tour in the Far East for RAAF aircrew at this time was 18 months. RAF aircrew stayed for an indeterminate period; some, by 1941, had served 7 years in the Far East.

Maltby, in his despatch, said that they had reached a higher standard of training than had the R.A.F. Blenheim squadrons but, as with No. 21 Squadron, some of their fully trained aircrews were required for the further expansion of the R.A.A.F. in Australia and as proficiency was reached these crews were posted home for that purpose. Maltby wrote of them:

> There was therefore . . . a wide variation between crews in the degree of their training and especially in night flying in which a high degree of skill was desirable for operating through the violent tropical thunderstorms which prevail over Malaya at night during the monsoons.

Because, in so small a force, specialisation was impracticable, bomber and general reconnaissance aircraft were bracketed together, and Hudson and Blenheim crews had to be trained for both day and night bombing. The probable targets in Indo-China were by this time just within reach of the Blenheim IV, of which there was one squadron—No. 34 R.A.F. —and the Hudson aircraft of the R.A.A.F. if based at the northern extremity of Malaya, but the command had too few Blenheims, and since seaborne invasion was the main threat to Malaya the Hudsons were needed for the vital seaward-reconnaissance.

All these problems had been assuming more and more urgency as Japan increased her pressure on the timid Thai authorities and the powerless Vichy French régime. On 23rd July the Japanese had demanded bases in French Indo-China. This was acknowledged in Vichy with "no objection to temporary occupation". There then existed an economic agreement between Britain and Indo-China which professed a mutual desire for friendly relations. Just how futile Vichy's profession of friendship really was became clear when, on 24th July, Japanese warships were reported off Camranh Bay on the French Indo-China coast, and when, four days later, Japanese troops landed at Saigon. On 26th July all Japanese assets in the United States were frozen, a drastic American counter-stroke which the British and Netherlands Governments promptly imitated. Japan was thus being deprived, among other things, of the oil supplies on which her whole war machine depended. The pact between Japan and Indo-China was formally signed at Vichy on 29th July, the announcement disclosing that it gave the Japanese the use of eight airfields in Indo-China. By the end of July the Japanese forces were well established in Indo-China and were busily engaged in improving the existing aerodromes and building new ones. It was obvious that Japan had no intention of limiting herself to the terms of any formal agreement and that Vichy had no intention of trying to restrain her.

Brooke-Popham's command was now being seriously endangered by penetration of southern Indo-China, with only the Gulf of Siam separating the Japanese forces from the Kra Isthmus and the land route into Malaya. But any direct military action by his forces was out of the question for, apart from the insufficiency of these forces, he had been instructed very precisely that it was Britain's policy to avoid war: "Avoidance of war

with Japan is the basis of Far Eastern policy and provocation must be rigidly avoided," a message from the British Government had informed him in March. His perplexity was great. As he later explained in his despatch, he found it difficult to determine whether this move by the Japanese signified definite plans for an offensive in the near future, or whether it was merely the acquisition of a strategic asset to be used in negotiation, or again, whether it was the first step towards the occupation of Thailand.

In August when Mr Churchill and President Roosevelt held their memorable Atlantic Charter meeting in Placentia Bay, Newfoundland, Roosevelt agreed to inform the Japanese Ambassador in Washington that "any further encroachment by Japan in the South-West Pacific would produce a situation in which the United States Government would be compelled to take counter-measures, even though these might lead to war between the United States and Japan". On 15th August Churchill informed Menzies of this American warning to Japan adding:

> Once we know this has been done we should range ourselves beside him [Roosevelt] and make it clear that if Japan becomes involved in war with United States she will also be at war with Britain and British Commonwealth. . . . If this combined front [the United States, the British Commonwealth, Russia and the Netherlands] can be established including China, I feel confident that Japan will lie quiet for a while. It is, however, essential to use the firmest language and the strongest combination.[9]

Within two months of this expression of qualified confidence by Churchill, Brooke-Popham was again in Australia for further consultations in which he once more expressed his confidence in the Malayan defences. The Commander-in-Chief told a meeting of the Advisory War Council on 16th October—the first since Mr Curtin's accession to the Prime Ministership—that the strength of the air force in Malaya was improving and referred specifically to the five Buffalo fighter squadrons. The Buffaloes, he said, were superior to the fighters used by the Japanese and were well suited to the operations in Malaya.[1] He admitted a shortage of long-range and torpedo bombers and again mentioned his reliance on Australian production of Beauforts. It was possible now, he said, to send another fighter squadron to Hong Kong where the military forces had been strengthened. Despite the lack of enthusiasm of the British Chiefs of Staff this vulnerable island still held a high place in Brooke-Popham's

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[9] Churchill, Vol III, p. 399.

[1] Apart from complaints about this aircraft's inefficiency from pilots in his own command, of which he must then have been aware, Brooke-Popham in his official despatch admitted that the Buffalo's performance at heights of 10,000 feet and over was relatively poor, a fact which he had already demonstrated (in September) by a test in Burma. This showed its inferiority to the American Tomahawk which members of the AVG doubted would be a match for Japanese fighters. Yet at this time there was Intelligence information to show that the Japanese Zero was powerfully armed (two 7.7-mm guns and two 22-mm cannon), had a maximum speed of 345 m.p.h. and a range, with maximum fuel load, of 1,500 miles—an impressive performance by any standards then known and one which, clearly, was far beyond that of the Buffalo. Brooke-Popham should not have lacked this information which in fact was issued with a noteworthy review of the origin, growth, organisation and development of the Japanese Navy and Army Air Services as a RAAF Intelligence memorandum, just 10 days before Brooke-Popham's comments to the Advisory War Council.

strategic concept. He told the Advisory War Council that with the Philippines it might form "pincers" which could be brought into operation if Japan moved south.[2] All indications, he said, suggested that Japan had temporarily diverted her attention to the north. It was thought that Russia's preoccupation with the war with Germany presented Japan with an opportunity to rid herself of the Russian threat from Vladivostok. Brooke-Popham also considered that it would take Japan some time to reconcentrate for a move southward and that for the next three months she would not be able to undertake a large-scale attack in the south. This gave time for the strengthening of defences and the "perfection" of plans, though he acknowledged the possibility of Japan invading Thailand and working down through the Kra Isthmus for an attack on Malaya in conjunction with a seaborne attack from Indo-China. While the Russian threat to Japan in the north remained, the maximum number of aircraft she could provide for operations in the south was about 500, not all of which were of modern type. But her principal limitation in the south was lack of adequate airfields and she was taking steps to improve those in Indo-China. This limitation in airfields restricted the availability of Japanese aircraft for operational use at this stage to about 250. The existing British, Dutch and Australian air forces could cope with any aircraft the Japanese could base on their present airfields in the next three months.

Curtin's view was that it seemed unlikely that the aircraft program (336 for Malaya, Burma and Borneo) would be completed by the end of the year. Brooke-Popham replied that about 180 aircraft were "in hand", including seven Catalinas, more of which were needed for reconnaissance in the Indian Ocean based on Ceylon and for operations as far away as the east coast of Africa.

But the Prime Minister was not reassured. Vital deficiencies in April, when Mr Menzies was in England, appeared to be still outstanding, he said. This was probably due to a general shortage and was also associated with the soundness or otherwise of the view that Japan would move in the north before turning her attention again to the south. The urgent needs of the Far East should be represented strongly to the British Government. Brooke-Popham answered that he had made all representations short of resigning. The British Chiefs of Staff were not neglecting the Far East and probably had made a fair allocation of aircraft from the resources available.

At this same meeting the Prime Minister spoke of information received from London that the British Government intended to dispatch a squadron of capital ships and a battle cruiser to the Indian Ocean; the High Com-

[2] Brooke-Popham proposed that such a squadron for service in Hong Kong should be formed and that Australian airmen (presumably from those already serving in Malaya) should volunteer for service with it. The War Cabinet approved of this on 7th November 1941. Mr Churchill records that early in 1941 several telegrams arrived from Brooke-Popham urging the reinforcement of Hong Kong. "I did not agree . . .," the British Prime Minister wrote, and later, "This is all wrong. If Japan goes to war with us there is not the slightest chance of holding Hong Kong or relieving it. It is most unwise to increase the loss we shall suffer there. . . . Later on it will be seen that I allowed myself to be drawn from this position, and that two Canadian battalions were sent as reinforcements." Churchill, Vol III, p. 157.

missioner in London was "not without hope" that a modern ship—either *King George V* or *Prince of Wales*—would be included in this squadron.

Early in August Mr Churchill had appointed Mr Duff Cooper, formerly Minister for Information, to become Minister of State in the Far East. Three months later Duff Cooper visited Australia for consultations. Addressing a meeting of the Advisory War Council on 7th November, he outlined a plan for the establishment of a Defence Council in Singapore. Curtin was not impressed. He said that he preferred the appointment of a member of the British War Cabinet (preferably Duff Cooper himself) as the sole authority in Singapore.

CHAPTER 8

AMERICAN PREPARATIONS

IT was now almost certain that the United States would fight beside the British countries should Japan attack, and, if the United States was an ally, an entirely new appearance would be given to the balance of sea and air power in the Far East. The United States possessed a navy more powerful than Japan's, and naval and army air forces far stronger than the air force which Britain and the Dominions could afford to deploy in the Far East while they were at war with Germany and Italy.

The fact that the vast distances of the Pacific separated the United States from the power whom she had long regarded as her main potential enemy had caused her to develop doctrines about the use of air power somewhat different from those adopted by the close-set nations of Europe. As early as 1933 the Americans had reached two radical conclusions on the strategical use of air power: that the heavy bomber must take precedence in new equipment, and that capacity for both long-range reconnaissance and bombing could be combined in one aircraft. American researchers then believed that a range of 5,000 miles and a speed of 200 miles an hour were practical.

In December 1933 the United States Army Air Corps, thinking in terms of the reinforcement of distant overseas bases, submitted to the War Department a project for the construction of such an aircraft. In May 1934 the General Staff approved the project while restating the purposes of this aircraft as the destruction by bombs of distant land or naval targets and the reinforcement of Hawaii, Panama and Alaska without the use of intermediate servicing facilities.[1] The Boeing Aircraft Company was given a contract in 1935 for one aircraft of this class.[2] Meanwhile, at the same factory and as a result of this project, another aircraft appeared—the XB-17. This aircraft, a four-engined bomber like that from which it derived, made its first and successful test flight in July 1935 and, a month later, it was flown 2,100 miles at an average speed of 232 miles an hour. In October this prototype aircraft crashed and was burned. The Air Corps had already recommended the purchase of 65 XB-17s but, though it was established that the crash had not been caused by mechanical fault, the order placed in January 1936 was confined to 13. The first of these aircraft—now known officially as the B-17 and popularly as the Flying Fortress—was delivered in January 1937 and the full order by August of the same year.[3]

The American Army Air Force was thus concentrating particularly on the four-engined bomber. In January 1939 Roosevelt, urging on Congress

[1] Craven and Cate (Editors), *The Army Air Forces in World War II*, Vol I, p. 66.

[2] Designated the XB-15 it was not itself completed until 1937.

[3] Out of the same project later came the B-24 (Liberator) and the B-29 (Superfortress), which were to join the Flying Fortress in establishing the bombardment might of the USAAF.

the appropriation of 300,000,000 dollars for the purchase of aircraft, was asserting that "increased range, increased speed, increased capacity of aeroplanes abroad, have changed our requirements for defensive aviation". The existing army air force of approximately 1,700 tactical and training aircraft, 1,600 officers and 18,000 other ranks he described as "utterly inadequate".[4] But the task of developing the air force was not to be easy despite the President's emphatic approval. In 1938 the War Department had informed the Air Corps that no military requirements existed for the four-engined bomber.[5] In that year the best Service bomber in the United States was the B-17 with a theoretically useful radius of 1,000 miles. In October of the same year a bomber with a radius of 1,500 miles was recommended as a minimum requirement and in June 1939 a call was made for the development of two new heavy bombers, the radius to be 2,000 miles and 3,000 miles respectively. Little more than twelve months later, when the fall of Britain seemed such a possibility as to suggest that the United States might have no friendly base within striking distance of German bases, a radius of 4,000 miles was recommended. In the meantime the establishment of new bases would permit a cover of all sea and land areas from which enemy attack might come, using existing aircraft among which the B-17 was outstanding. This at least was the way the advocates of air force development saw it.

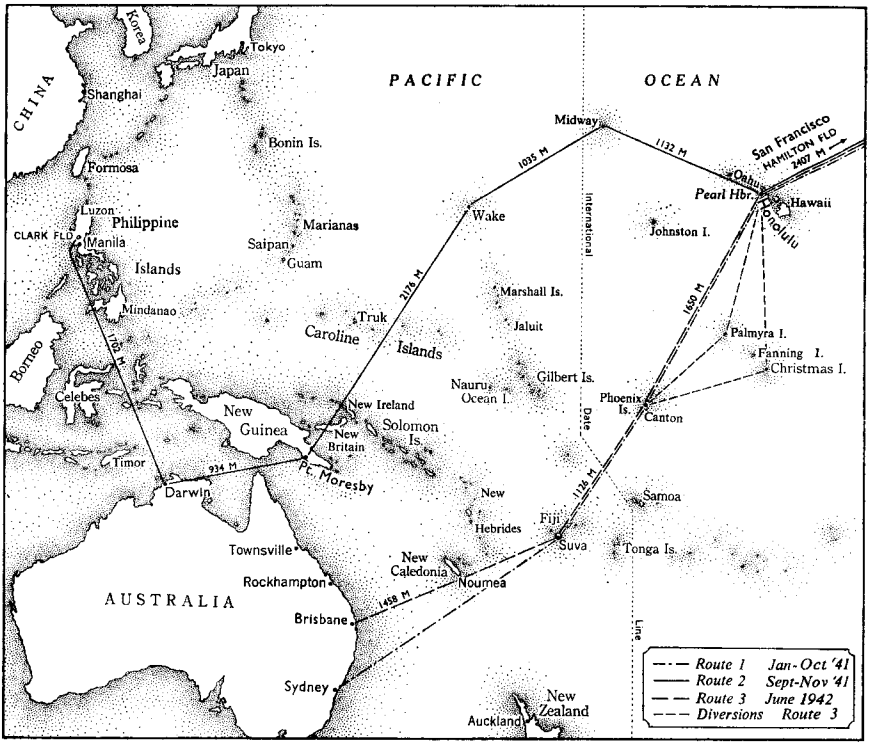
Australia's interest in the trend of American military aviation and air force strategy could not have been keener—we have already noted the briefing of the Australian Minister to Washington with arguments for the use by the United States of bases in the Pacific—yet any high Australian hopes that prompt action would be taken to build American air power in strength in the Far East were held in check by the United States' strong preoccupation with the war in Europe. In June 1940, the United States administration tended to favour Britain's immediate needs in preference even to the expansion of the U.S.A.A.F. When it became more apparent that America might enter the war, a huge pool of weapons was planned to serve all anti-Axis nations according to their needs. Meanwhile, for American defence, the Alaska, Hawaii and Panama areas were to receive some attention, but the Atlantic and Caribbean areas held priority. Although the exposed state of American possessions in the Far

[4] Within 3 months Congress had authorised the procurement of 3,251 aircraft and had approved a total strength of 5,500 aircraft (a figure soon afterwards raised to 10,000), 3,203 offrs and 45,000 other ranks. The Air Corps was then planning on the basis of 24 tactical groups ready for combat by the end of June 1941. An American group was the equivalent of a British wing.

[5] Illogical though it may seem, and recognising that the air corps without autonomy was virtually submerged in the army, the United States Navy was the first of the American fighting Services to champion the heavy bomber. In General Arnold's words, the navy "took better note of the strategic meaning of the Flying Fortress than the army seemed able to do". As early as 1937 it issued a Service pamphlet which boldly stated the case for the heavy bomber with a prophetic application of the argument to the prospect of war with Japan. "If the Army is to advance or even remain in position, it must be ready to suppress enemy operations *behind the front*" (the pamphlet stated). ". . . Nothing behind the enemy front is entirely secure from observation and attack. . . . If the Philippines were to fall into the hands of the Japanese, aviation would gain an increased potential influence in defence of Japan's control of the China Sea and the Western Pacific. . . . It may be well to reiterate that a sustained *air offensive against an enemy's interior organisation will usually be a test for aviation strategy* which will lie entirely outside the sphere of normal military and naval activities."—H. H. Arnold, *Global Mission* (1949), p. 168. (The italics are Arnold's.)

East suggested a need for urgent defence action, strategists in the United States had long regarded the Philippines, with the forces likely to be available, as untenable against a strong Japanese attack.

Much nearer the United States, and therefore well within the scope of home defence planning, the Hawaiian Islands, with their great naval and air bases, formed the focal point of American Pacific strategy. A noteworthy point in an air force interpretation of this strategy was that,



Pacific air ferry routes

while the air units in Hawaii were intended principally for the defence of the islands' naval and military establishments, the marked increase in the striking range of the heavy bomber was beginning to exert an influence. Even so the Air Corps could not claim that the War Department had been won over to its concept. As late as February 1941 the War Department not only had no plans for the movement of long-range aircraft to the Far East, but declared that it could see no need for them, and that it regarded as inadvisable the establishment of air bases in the Pacific islands which might possibly fall into the hands of the enemy.[6] But the barometer in the Orient was falling sharply and the War Department found

[6] Craven and Cate, Vol I, p. 180.

itself forced to take heed of Japan's increasingly menacing behaviour and recognise that America's Pacific defences must be strengthened. In a matter only of months after its negative statement, it approved the preparation of runways on Midway, Johnston, Palmyra, Canton and Christmas Islands. With these stepping-stones established and transit-right through Australia assured, a ferry route for land-based heavy bombers could be established across the Pacific from the United States to the Philippines.

For some time the U.S.A.A.F. had favoured the sale to foreign powers of its own tactical aircraft types, hoping that sales abroad would cause expansion of the aircraft industry without expense to the Government and also help to pay for research and development. Under the "Cash and Carry" legislation aircraft were released to France, Britain and the British Dominions. In March 1940 this policy was extended to permit the sale of certain aircraft to foreign countries as soon as a superior type could be supplied to the Air Corps.[7] The demands on the United States aircraft industry grew prodigiously.[8] Britain's orders, including those taken over from France, called for 14,000 aircraft, while the Air Corps' own program called for delivery of 21,470 tactical and training aircraft by 1st April 1942.[9] With the navy's demands added, this set an immense task; the industry had been asked to expand from a normal capacity of about 2,000 aircraft a month to more than 4,000 a month. Production figures for 1940 showed an increase of 250 per cent over those for the previous year, full pressure being applied in the latter half of the year under the influence of the fall of France and the Battle of Britain, a period in which 3,770 aircraft were accepted by all users. At the beginning of July 1940 the needs of the R.A.F. had been accepted as most urgent and it was reasserted in the United States that these must have priority over the expansion of the U.S.A.A.F. which, for the three years to 7th December 1941, had been authorised to procure about 37,500 aircraft.[1]

Such was the force of this policy that on 23rd July 1940 it was decided that the U.S.A.A.F. should defer acceptance of 8,586 aircraft in favour of the R.A.F. In the next month the Joint Aircraft Committee was formed

[7] Including the Flying Fortress, Liberator, Mitchell, Marauder, Boston and Tomahawk.

[8] The student wishing to examine in greater detail the background to American aircraft production and aid to the anti-Axis Powers in this period is referred to Craven and Cate, Vol I, Ch 4, which has been drawn on substantially for the outline contained in these pages.

[9] By May 1940 the President was calling for an annual output of 50,000 aircraft and a total strength of the same number for the American fighting Services (army 36,500, navy 13,500). The USAAF plan had been expanded to provide 41 groups. Two months later the plan was for 54 groups—an air force with 4,000 tactical aircraft, 187,000 enlisted men, 15,000 aviation cadets and 16,800 offrs. By the autumn of 1941 an 84-group program was being planned and, though this ambitious project was not developed immediately, by the first week in December the AAF had 70 tactical groups formed including 14 heavy and 9 medium bombardment and 5 light bombardment, 25 pursuit, 11 observation and 6 transport. Some were of cadre strength only and few had suitable aircraft; full achievement of this objective was still impossible while the aircraft industry remained unable to meet both American and British demands.—Craven and Cate, Vol I, p. 105.

[1] By this time ten tactical aircraft types were in production (that is, accepted for tactical use): *heavy bombers*—B-17 (Flying Fortress), B-24 (Liberator); *medium bombers*—B-25 (Mitchell), B-26 (Marauder); *light bombers*—A-20 (Boston and Havoc) and A-24 (Dauntless); *pursuit*—P-38 (Lightning), P-39 (Airacobra), P-40 (Kittyhawk), P-47 (Thunderbolt). Of these the B-17 had come into production in 1936, the B-24, A-20, P-38, P-39 and P-40 in 1940 and the B-25, B-26, A-24 and P-47 in 1941. The A-20 and P-40 had already been tested in combat by the British Commonwealth air forces, the B-26 was still an unknown quantity and, for offence, the USAAF was pinning its faith particularly to the B-17, B-24 and B-25.

in Washington with representation from the Air Corps, the navy's Bureau of Aeronautics and the British Purchasing Commission. In January 1941 this committee was given control over all foreign contracts for the delivery of aircraft and all production plans were integrated. But Britain's dollar supply was dwindling rapidly and loans by the United States to foreign Powers for the purchase of weapons were prohibited. Roosevelt, in an address to Congress on 6th January, gave the answer: Lend-Lease, a momentous project which became law on 11th March. On 27th March Congress authorised 7,000 million dollars for this purpose.

The detailed organisation and the vast consequences of Lend-Lease are not subjects for this volume, but since aircraft and aircraft supplies were the most important of the items concerned, some consideration of these is essential to an understanding of the Pacific scene. On the day Congress authorised its huge appropriation, the United States and British Service staffs, who had been studying the problems of military collaboration if America should go to war, produced two reports known as A.B.C. 1 and A.B.C. 2. The first objective in A.B.C. 2, which was concerned with air collaboration, was achievement of the U.S.A.A.F's program of 54 groups, planned on the understanding that if America entered the war a substantial proportion of these groups should be based in Britain. This program was to be advanced to 100 groups as the minimum needed should the British Isles be lost as a base, but the key to the delivery of tactical aircraft was still their effective combat use, and the U.S.A.A.F. must therefore defer even its 54-group program to the extent that aircraft made available in this way could be used in the offensive against Germany. Though A.B.C. 2 was not approved formally on a Government level, yet "in spirit if not in letter its principles served as a guide to aircraft allocation".[2] This decision deferring the allocation of aircraft, difficult indeed for the American Air Force which had been striving hard for its own development, was made still more difficult by the tension Japan was developing in the Pacific.[3] The only solution lay in increased production. British requirements were estimated at 49,385 aircraft, including first-line strength and wastage for the R.A.F. and the Fleet Air Arm, but not trainers or strategical reserve. Of these Britain expected to build 35,832 by July 1943, leaving 13,553 to be provided by the United States. In October 1941 the United States and Britain each agreed to provide 1,800 aircraft to help Russia withstand the German onslaught which had opened on 22nd June. To cover the period from 1st October 1941 to 30th June 1942, the United States air staff recommended that, of 14,802 tactical aircraft, 9,708 should go to the proposed anti-Axis pool and the remainder (5,094) to the U.S.A.A.F. When this allocation to the Air Corps (con-

[2] Craven and Cate, Vol I, pp. 130-31.

[3] The American objective in pilot training was raised from 1,200 a year to 7,000 in 1939 and then to 12,000 in 1940, to 30,000 in February 1941 and, by the autumn of that year, with an 84-group program under discussion, a training rate of 50,000 pilots a year, to be achieved by mid-1942, was being contemplated. By November 1941, the training of technicians had begun in air force and contract schools at a rate calculated to provide 100,000 a year.—Craven and Cate, pp. 110-11.

sidered the minimum requirement) had been reached, 30 per cent of the orders placed by the U.S.A.A.F. might then be diverted for foreign needs. The pool was to be divided in a ratio approximating 50 per cent for the British Commonwealth, 30 per cent for the U.S.S.R., 10 per cent for China and 10 per cent for other friendly nations.

In its simplest terms the situation was that up to October 1941 the U.S.A.A.F. had not been allocated sufficient aircraft to permit the early achievement of its 54-group program. The governing principle that allocation of aircraft should depend on ability to absorb them usefully—that is, in combat—must have seemed well justified. On the other hand endeavours to increase American heavy-bomber strength in the Pacific suggest that this might have been modified had it not been that time available to the United States to prepare for war was being over-estimated—a factor which will be considered later.

The strategic principles on which Anglo-American collaboration was based had established quite clearly that the Atlantic and European areas were the decisive theatres. Therefore America's best contribution against Japanese aggression was deemed to be the use of her Pacific Fleet to weaken Japanese economy and to divert Japanese strength away from the Malay Barrier. When this policy was determined, it was accepted that American strength in the Far East would not be increased. By logical determination the eastern Atlantic, Mediterranean and Near East were allocated as areas of British responsibility and the western Atlantic and Pacific as American. But the Far East presented no basis for such clear-cut allocation. Here command of naval forces was divided between the Commanders-in-Chief of the British China Fleet and the United States Asiatic Fleet, while the army and air forces in each area would operate, it was assumed, under their own commanders, coordinating their efforts as best they could.

Since 1939 the War Plans Division of the United States General Staff had produced five separate plans to which the generic code name "Rainbow" had been given. Rainbow No. 5, which contemplated offensive action in the Atlantic and European areas and "strategic defence" in the Pacific, had been completed by the end of April 1941. While the basic principles of this plan remained unchanged there were important revisions in the following six months to meet the changing international situation, and here lay the key to a vital alteration in American policy in the Pacific—a decision to reinforce United States air units in the Far East. In British, Dutch and Australian eyes this was momentous for, though the revision did not receive the approval of the Joint Board of the United States Army and Navy until 19th November, the Secretary of War approved a plan, early in August, for the dispatch of modern aircraft to the Philippines as soon as they became available. Even this authority had been anticipated by the U.S.A.A.F. which had already allocated to the Far East (on paper) four heavy-bomber groups (272 aircraft with 68 in reserve) and two fighter groups (130 aircraft).

> The notion that the Philippines could be defended, in spite of all the considerations that had led the planners so often to reject the idea, grew out of a new approach to the problem of operations in the western Pacific, involving the use of long-range Army bombers to neutralize Japanese offensive capabilities . . . a fairly strong bomber force might be built up in the Philippines by early 1942 to take the place of the strong naval forces that neither the U.S. Navy, on the one hand, nor the British, Dutch, and Australian Navies, on the other, were willing to commit to the support of the Philippines.[4]

As yet, however, there was a strong wishful quality about this planning. The supply of aircraft did not permit effective immediate action, but the planning itself was time-saving. Rainbow No. 5 was reviewed by Roosevelt and Churchill at their Atlantic Charter meeting in August 1941, and since General Arnold accompanied the President and the Vice-Chief of the British Air Staff was with the British Prime Minister, consideration of air strategy was well cared for.

In the course of a report prepared at Roosevelt's direction and submitted on 11th September, the U.S.A.A.F. proposed that for the air defence of the Western Hemisphere and United States overseas possessions, a force of 23 bombardment and 31 pursuit groups should be provided. These forces, in general, were to be "oriented" towards Japan, aircraft based in Alaska, Hawaii and even on the west coast of America, sharing in the strategic plan. Beyond what these forces could accomplish, responsibility lay mainly with the United States Navy. In keeping with the policy adopted in August of reinforcing the Philippines, it was proposed to add one pursuit and two heavy bomber groups to the air forces in these islands.

Despite Hawaii's relatively high air force status since 1935, it was not until early in 1941 that modern aircraft were provided for the air base at Oahu. At the beginning of 1941 air strength at Hawaii was 117 aircraft, all of them obsolescent. Fighter aircraft were sent, including 55 Kittyhawks in April, but much more dramatic was the flight from San Francisco to Oahu on 13th-14th May of 21 Flying Fortresses of No. 19 Bombardment Group commanded by Lieut-Colonel Eugene L. Eubank. This flight was not only the first mass movement of heavy bombers over the 2,400-miles ocean route to Hawaii[5] but it emphasised the strategic value both of these aircraft and of the Pacific island bases. There followed, in July, detailed planning for the employment of heavy bombers in the Hawaiian area on the basis of three major provisions: complete daylight air reconnaissance in the area, an attack force on call to strike at any target located by such reconnaissance, and, if the target should be an aircraft carrier, attack against it on the day *before* it could manoeuvre into position to launch an air attack on Hawaii. The plan showed that, if the force was to be fully responsible for reconnaissance, 72 Flying Fortresses would be needed for daily search within a radius of 833 nautical miles from Oahu—more heavy bombers than the entire U.S.A.A.F. then possessed.

[4] M. Matloff and E. M. Snell, *Strategic Planning for Coalition Warfare 1941-1942* (1953), a volume in the official series *United States Army in World War II*, pp. 69-70.

[5] Average elapsed time for the flight was 13 hours 10 minutes.

Though the status of the Hawaiian Air Force had now been advanced, the decision to reinforce the Philippines reduced its aircraft allocation priority and even diverted some of its existing strength.[6] Of the approach of war with Japan there now seemed little doubt and, as it was considered that the Philippines would be most likely to receive the initial attack, the Hawaiian Air Force, which had been placed on the alert particularly against sabotage and a local uprising, found itself concerned with the task of aiding Philippine reinforcement.

Before August 1941 it had been accepted that Manila would not be defended if the Philippines were attacked; the American forces on the island of Luzon would withdraw to Bataan there to hold out, it was hoped, with the aid of the harbour's forts, until aid could reach them—Bataan becoming to the American forces what, in similar circumstances, Singapore was expected to be to the British Commonwealth forces. The man chiefly responsible for a radical change in this strategy was General MacArthur who, from the post of military adviser to the Philippine Government, was recalled on 26th July—the day of the freezing of Japanese assets in America—to resume active duty with the U.S. Army and appointed Commander-in-Chief of the United States Army Forces in the Far East. MacArthur was then so optimistic about the increasing strength of the forces he commanded that he believed an invasion force could be met and defeated on the beaches.[7]

For air defence MacArthur had as yet only the comparatively diminutive Philippine Department Air Force, commanded by Brigadier-General Henry Clagett, who arrived in Manila in May 1941. As his chief of staff Clagett had Colonel Harold H. George, a vigorous officer who quickly attracted the attention of his seniors in the Philippines and eventually in the War Department by producing a plan so offensive in concept and bold in its demands for equipment that it startled his fellow officers. Clagett, fearing unfavourable repercussions in Washington, was hesitant but George had a friend at the Manila "court"—Lieut-Colonel (soon to be Brigadier-General) Richard K. Sutherland, MacArthur's Chief of Staff, who supported his plan strongly. When on 4th August the Department Air Force became the air force of the United States Army Forces in the Far East, Sutherland sought and obtained MacArthur's sanction to George's plan, with certain changes, as the basis for the reorganised air force. With April 1942 set as the time for its accomplishment, the War Department accepted this plan as the main step towards the achievement of genuine American air power in the Pacific. It was in fact George's plan for a force of four heavy bomber and two fighter groups that was proposed, as we have

[6] At the same time the US Navy sought Army Air Force garrisons at Midway and Wake Islands where, though other facilities were inadequate, the navy was improving the airfields. When the commander of the Hawaiian Department, Lt-Gen Walter C. Short, advised the War Department in November that two pursuit squadrons (120 officers and men and 25 Kittyhawks) were available for dispatch to these two islands by carrier, it was pointed out that Kittyhawks would be "frozen" to the islands through inability to land on carriers and decision on this plan was deferred. Craven and Cate, Vol I, pp. 170-75.

[7] MacArthur wrote to General Marshall in August that the Philippine Army program was "progressing in leaps and bounds . . . the development of a completely adequate force will be rapid". —Watson, *Chief of Staff: Prewar Plans and Preparations*, pp. 433-4.

already noted, in anticipation of the revision of the Rainbow 5 plan. The most significant point about this planning was that at the time the U.S.A.A.F. did not possess one complete group of heavy bombers in its entire organisation. The answer was to gather together the aircraft and crews that were available and get them across the Pacific by way of Australia as speedily as possible. Priority in the allocation of Fortresses was given to No. 19 Group which had ferried the first of these aircraft to Hawaii in May, but by the end of July the need of the Philippines was regarded as so urgent that, anticipating the final authority for its action, the U.S.A.A.F. decided to send a provisional squadron from the Hawaiian Air Force. The planners lacked information on Australian airfields and so, in August, a survey party left Honolulu in two navy Catalinas on a tour in the course of which they visited Rabaul, Port Moresby and Darwin.

On 5th September nine Fortresses, flown by members of No. 14 Bombardment Squadron and commanded by Major Emmett O'Donnell Jnr, took off on the first stage of the trans-Pacific flight—from Honolulu to Midway Island, 1,132 nautical miles. The next day's flight was to Wake Island, 1,035 miles distant and then the formation flew south-west to Port Moresby, a distance of 2,176 miles. On this stage, they passed over the Japanese-held Caroline Islands by night at 26,000 feet without navigation lights and in radio silence to avoid "international incident". On 8th September the Fortresses reached Port Moresby where the crews rested for two days, and were welcomed by R.A.A.F. and other Service and civil officers, whose interest in the flight was intense. The next stage of 934 miles to Darwin was traversed in six hours and a half. On 12th September the final stage, from Darwin to Manila (1,702 miles) was flown in part through tropical storms which forced the bombers down to a few hundred feet above the sea. They arrived safely at Clark Field, near Manila, in a heavy rain storm.

MacArthur's satisfaction at this achievement was increased when he learned that he was to receive in addition a light bombardment group of 52 A-24's (Dauntless dive bombers) and 26 more Fortresses by the end of November. From the unenviable position of "no hope", his command had now been advanced to the highest priority for the delivery of combat aircraft. Just what this meant in Washington's conception of urgency was illustrated by the listing of 165 heavy bombers for delivery to the Philippines out of a total production of 220 up to the end of February 1942.

The South Pacific air route project began to receive keen attention. Recommendations for its development submitted by the U.S.A.A.F. on 3rd October were approved immediately. On that date a letter from the President to the Secretary of War authorised him to "deliver aircraft to any territory subject to the jurisdiction of the United States, to any territory within the Western Hemisphere, to the Netherlands East Indies and to Australia", and to provide the facilities needed for such delivery. Negotiations for authority to use territory in the South Pacific, then began with Britain, Australia, New Zealand, the Netherlands and the Free French.

When the Australian War Cabinet met on 18th October it had before it an aide-mémoire from the United States Minister in Australia informing it of the desire of the United States Government to establish an air route between the Hawaiian and Philippine Islands and requesting the cooperation of the Australian Government in providing air bases at Rabaul, Port Moresby, Rockhampton (later amended to Townsville) and Darwin. The War Cabinet's reception of this request is not difficult to imagine. Direct United States military contact with Australia to create a route along which war planes would fly right through to the Philippines had double value. On the one hand it was clear proof that Australia would now come directly within the scope of American planning for strategic defence and on the other hand there was the cheering prospect that at last the Philippines defences, right in the front line, would be strengthened. The response was prompt. The United States Minister was told that the Government welcomed the proposal and was willing to cooperate in providing the bases required, the construction of which the War Department wished to leave to the Commonwealth Government with American financial and technical aid. Agreement having been reached in principle, the Commonwealth Government granted "blanket" authority to the War Department and its officers to undertake surveys separately or jointly with other authorities concerned and for the entry of construction parties to selected sites.

A further aide-mémoire from the United States explained that the War Department attached great importance to the training and "familiarisation" of heavy-bomber crews operating in the areas in question and requested permission to use agreed upon airfields for training and technical purposes with a further request for permission to send in maintenance staff and to store spare parts, fuel and bombs at certain of these places and to establish communications facilities. These requests were referred to the Advisory War Council which, at its meeting on 23rd October, welcomed the proposals, endorsed the War Cabinet's "agreement in principle", and recommended that the details should be decided by the Department of Air in collaboration with General MacArthur in Manila—a recommendation which the War Cabinet promptly approved.

The American survey showed that at Christmas and Canton Islands, Suva in the Fijis, and Townsville, at least one 5,000-feet runway in the direction of the prevailing wind could be prepared by 15th January 1942. By November 1941 the diplomatic way had been cleared. In New Caledonia where, with the permission of the Free French, a small force of Australian troops was to be stationed in December, the aid of the Australian authorities was sought and given for improvement of the airfields there to provide a staging point between Fiji and Australia. From 27th October MacArthur became responsible for the route from Australia to the Philippines, and the Hawaiian Department for that portion to the east of Australia. New Zealand had agreed to improve the airfield at Nandi, Fiji.

While this development was going on the Midway-Wake route remained the recognised route for the ferrying of heavy bombers. Japanese air units in the Caroline and Marshall Islands remained a threat but the ferry crews were instructed to take evasive action to avoid contact with them, just as O'Donnell's crews had done. MacArthur chartered two ships to supply Rabaul, Port Moresby and Darwin with aviation fuel and further shipments were arranged for delivery from America. Meanwhile the movement of No. 19 Group from Hamilton Field (San Francisco) to Hickam Field (Hawaii) began, and by 22nd October the last of 26 Flying Fortresses had arrived. Here the aircraft were divided into several flights since few of the staging bases on the route to the Philippines could accommodate 26 heavy bombers at one time. Then the long flight began. Despite bad weather and engine trouble the 26 Fortresses had all reached Clark Field safely by 6th November. The United States Far East Air Force now included V Bomber Command (under Lieut-Colonel Eubank), V Interceptor Command and the Far East Service Command.[8]

Use of heavy bombers in the Philippines was circumscribed by the fact that there were only two aerodromes from which they could operate in the wet season. One was Clark Field, about 65 miles north-west of Manila, and the other Del Monte, in northern Mindanao, about 600 miles away to the south. Aerodrome development was planned to overcome this lack and, in addition, Australia, Britain and China were expected to provide bases in the Far East and the Pacific from which Flying Fortresses could operate.[9]

When the War Department finally agreed to reinforce the Philippines, General Arnold posted Major-General Lewis H. Brereton to Manila to command the U.S.F.E.A.F. Brereton flew to Manila by way of Midway, Wake and Guam Islands. At Guam he learned that the general feeling on the island was that it was "absolutely indefensible". Situated within 70 miles of a strongly held Japanese island (presumably Saipan) it would "certainly be picked off" on the outbreak of war without a chance for the garrison to escape. There were no runways on the island although construction of one had begun and would be completed "within a few months".[1] Brereton reached MacArthur's headquarters on 3rd November

[8] V Bomber Command: No. 19 Group—30 and 93 Squadrons (only 2 had arrived); 28 Squadron (heavy) which had been in the Philippines for about 15 years; 14 Squadron which flew the first Fortresses from Oahu in September. Air and ground echelons of No. 27 Light Bombardment Group reached Manila on 20th November without aircraft. (52 Dauntless dive bombers were delayed in Hawaii in the transport *Meigs* awaiting naval escort, and never reached the Philippines.)

V Interceptor Command: 24 Pursuit Group; 21 and 34 Squadrons of No. 35 Pursuit Group which arrived from America in November and were attached to No. 24 Group pending arrival of their own organisation.

The strength of the USFEAF in combat aircraft was: heavy bombers, 35 Fortresses; medium bombers, 2 squadrons of B-18's plus some spares; fighters, 72 Kittyhawks, 28 P-35's, plus approximately 2 squadrons of fighters in the Philippine Air Force.—Lewis H. Brereton, *The Brereton Diaries* (1946), p. 22.

[9] Brooke-Popham had, in fact, given instructions in September that two airfields in northern Malaya (at Gong Kedah and Butterworth) and two in the south (at Tebrau and Yong Peng) should be prepared to accommodate Flying Fortresses. Strengthening of the runways and their extension to 2,000 yards each was begun, but the work had been completed only at Gong Kedah by December. Two airfields in Burma were also listed for extension for the same purpose.

[1] Brereton, p. 17.

1941. In his first discussions with the general and his staff he found support for the opinion held in Washington that "hostilities, if and when they came, would not begin before 1 April 1942".[2] It was expected that by that date Brereton's command would have the complete air reinforcements promised and that the very considerable land reinforcements promised to MacArthur would also have arrived. In the meantime there were no anti-aircraft defences at any airfield, "the air-warning service was pitifully inadequate... there were no spare parts of any kind for P-40s..., nor was there so much as an extra washer or nut for a Flying Fortress." There were no spare engines for either bomber or fighter aircraft, and few tools of any kind for even rudimentary repair and maintenance. From Washington it was reported that chances for a settlement with the Japanese were now "about one in ten thousand". In Manila they seemed even less.[3]

Early in November Brereton left Manila by air at MacArthur's orders to survey the air ferry route between Australia and the Philippines and to report on a project for a supplementary route to China through Singapore. His instructions were to begin preparation of bases in northern Australia and throughout the Malay Barrier. MacArthur realised that should the Philippines fall adequate air defence along the line of these routes would be essential to the conduct of the Pacific campaign.

Batchelor airfield to the south of Darwin was Brereton's first contact with Australia. He described its facilities as "rudimentary" and observed that nothing was being done to prepare either Batchelor or Darwin for heavy bombers in transit. "We had already brought 35 heavy bombers from the States via the trans-Pacific ferry route," Brereton wrote in his diary on 13th November, "and there were three out of condition, including one wrecked on Batchelor Field owing to the condition of the runways."[4] But Brereton had been given unlimited authority by MacArthur to initiate aerodrome improvements at whatever cost and this he used immediately. He found Group Captain Scherger, who commanded the R.A.A.F. station at Darwin, "energetic, efficient and very impatient". With Scherger and Brigadier Blake,[5] the local garrison commander, he spent two days in a "hurried attempt" to prepare Batchelor aerodrome for the arrival of more Flying Fortresses that were due soon from the United States. He was sensitive to the fact that he was more than 2,000 miles from Melbourne and R.A.A.F. Headquarters and that he had not yet reported to Burnett, but he derived satisfaction from the fact that "Scherger was blessed with sufficient initiative to agree to continue the work even though lacking orders to do so; with the understanding that I would straighten out the situation on my arrival in Melbourne".

At the next Pacific ferry stop, Townsville, Brereton met "another very efficient and helpful man", Air Commodore Lukis, then Air Officer Com-

[2] Brereton, pp. 10 and 19.

[3] Brereton, pp. 22-4.

[4] Brereton, p. 25.

[5] Maj-Gen D. V. J. Blake. (1st AIF: 3 Sqn AFC.) Comd 7 MD 1941-42. Regular soldier; of Melbourne; b. Harris Park, NSW, 10 Nov 1887.

manding Northern Area who, "keenly alive to the situation, approved the steps I had taken at Darwin, and gave me his staff operations assistant to help me on the survey I intended making at Port Moresby, Papua and at Rabaul, New Britain". Aerodrome construction at Port Moresby was proceeding very slowly. "No sense of urgency was apparent though the rains were imminent," Brereton wrote (16th November) "and American bombers had been damaged here because of the condition of the runways. Again I met a very energetic and helpful man, Squadron Leader Pearce."[6]

News from overseas that the Japanese Premier Tojo and Foreign Minister Togo were proclaiming that Japan's aim was to force Britain and the United States from East Asia, caused Brereton to pause and wonder just how much time he had left to fulfil his mission. With the Australian Army commander in Papua, Brigadier Morris,[7] he flew to Rabaul where the aircraft, piloted by Colonel Eubank, broke through the runway surface on landing and thereby helped to emphasise the urgency of the purpose of his visit. Brereton left his Fortress at Brisbane because nowhere else in Australia—except Townsville and Darwin—was there a landing field large enough to receive it. Two hours after reaching Melbourne he had his first conference with Burnett. Of this he has recorded being "very cordially received and assured of the utmost cooperation". For three days and nights he conferred almost continuously with Burnett and senior R.A.A.F. staff officers, members of the Defence Committee, the General Staff and the navy. At the end of this time an agreement had been produced outlining completely the projects to be undertaken and authorising the work to be done. "I have never gotten a more comprehensive task completed in such a short time," Brereton wrote later, adding that Burnett was "a remarkable man" who "conducts a conference more efficiently and with less waste of time than most executives I have met".

The project outlined by this conference had three objectives. The first of these was immediate establishment of aerodromes for the ferry route to Darwin which was the Australian departure point for the Philippines, Java and Singapore. MacArthur had also commissioned Brereton to survey a route from Port Moresby to Mindanao direct, which would save two days and three landings but "disadvantages . . . loomed in the lack of adequate weather forecasting and the extremely dangerous terrain in northwest New Guinea". Preparations were also to be made for the unloading of American fighter aircraft at Townsville and Brisbane and for intermediate landing fields across the continent, the route to be Brisbane, Townsville, Cloncurry, Daly Waters and Darwin. Plant for assembly and maintenance was to be provided at Townsville, and additional dispersal airfields, training centres and a major repair depot were to be established at Brisbane.

[6] Air Cmdre C. W. Pearce, CBE, DFC. 10 Sqn; comd 11 Sqn 1941, RAAF in New Guinea 1941-42, Southern Area 1943; SASO 10 Group 1943-44; Director of Tactical Warfare RAAF 1944-45. Regular air force offr; of Hamilton, Vic; b. Kalgoorlie, WA, 29 Jan 1910.

[7] Maj-Gen B. M. Morris, CBE, DSO, VX285. (1st AIF: 55 Aust Siege Bty; 5 Div Arty 1917-18.) Comdt Aust Overseas Base ME 1940; Aust Mil Liaison Offr India 1940-41; Comdt 8 MD 1941-42; comd New Guinea Force 1942, Angau 1942-46. Regular soldier; of Upper Beaconsfield, Vic; b. East Melbourne, 19 Dec 1888.

The second objective provided not only for the airfields specified in the first, but for such other airfields as might be required to accommodate, for tactical operations and training, an American air force comprising 50 per cent of the strength assigned to the U.S.F.E.A.F. Brereton records that for a working basis this strength was assumed to be one heavy bombardment group, three fighter groups, three bomber reconnaissance squadrons, and accompanying services.

The third objective of the conference was development of training bases and additional operating bases in Australia, initially for an American air force of approximately four bombardment groups with one bombardment training centre, and four fighter groups and one fighter training centre. Because labour and material would have to come from the United States, Brereton encountered difficulty in advancing towards this third objective. He claimed that he found a tendency on the part of the Australian Government to ignore it. Yet, he wrote, both he and Burnett were convinced of the need for it, and with the help of the Prime Minister, Mr Curtin, and the Australian Minister to Washington, Mr Casey, they were able to "force action". To avoid publicity for his visit and its purpose Brereton and his staff wore civilian clothes and no military titles were used. "But we did not succeed in fooling anybody," he wrote later, "a Tokyo broadcast reported my presence in Australia and most of the details of our business. The Japs had their agents everywhere."

Brereton was then instructed by MacArthur to undertake comparable surveys of routes linking the Philippines with the Netherlands East Indies, Malaya, Burma and China.

Within a week of Brereton's return to Manila the Australian War Cabinet had approved of the proposals for the establishment of the airfields and operating facilities between Townsville and Manila. Airfield development to provide for the operation of about half the United States Far East Air Force from Australian bases—Brereton's second objective—was also approved on the same day—4th December. The plan was that these forces should be able to operate from the north of Australia to the Netherlands East Indies and New Guinea, or from the north-east coast of Australia to the Solomons or the New Hebrides. Approval for this was subject to the final sanction of the United States which would meet its cost—estimated at £5,227,845.

Comparable cooperation came from Brooke-Popham's command, the Commander-in-Chief himself visiting MacArthur in Manila twice in an endeavour to ensure that all possible coordination was achieved. In the original Rainbow 5 plan provision had been made for "British strategic direction" in action by the "associated forces" in the Far East. Now this had been revised on a basis of "mutual cooperation" which MacArthur was given wide powers to develop with the British commanders in his theatre. Another important change in the original plan was a corollary to the vital decision to send air reinforcements to MacArthur—offensive air operations were to be included in his "strategic defensive".

He was instructed that if war with Japan came, his air force was to undertake "air raids against Japanese forces and installations within tactical operating radius of available bases".

Tension with the Japanese was now approaching breaking point. By the second week in November the United States War Department planned that all "modernised" Flying Fortresses should be sent to the Far East. Within seven days this decision had been widened to include all Liberators. There could be no clearer sign of the apprehension of a Japanese assault for it meant that only 17 Fortresses would remain in all America—5 in use for test flying, one undergoing repairs, and 11 classed as obsolete. On 22nd November the U.S.A.A.F. issued a warning that all heavy bombers and pursuit aircraft destined for the Philippines should be on their way not later than 6th December. One source for this awareness of the "eve of war" among American commanders was gained by the "cracking" of the Japanese ciphers by the Intelligence service so that, from the end of 1940, the contents of many Japanese military and diplomatic telegrams were known to them. On 26th November Roosevelt sent an urgent message to the United States High Commissioner in the Philippines, saying:

> Preparations are becoming apparent . . . for an early aggressive movement of some character although, as yet, there are no clear indications as to its strength or whether it will be directed against the Burma Road, Thailand, the Malay Peninsula, the N.E.I., or the Philippines. Advance against Thailand seems the most probable. I consider it possible that this next Japanese aggression might cause an outbreak of hostilities between the United States and Japan. . . .

Roosevelt had before him on 30th November an intercept of a message from Tokyo to Berlin telling the Japanese Ambassador to address Hitler and Ribbentrop thus: "Say very secretly that there is extreme danger that war may suddenly break out between the Anglo-Saxon nations and Japan through some clash of arms and add that the time of the breaking out of this war may come quicker than anyone dreams." A British Intelligence report received late in October gave warning of the presence of two Japanese aircraft carriers in the waters of the mandated islands. This was followed a few weeks later by a report that Japanese aircraft had been detected flying over British territory possibly photographing some of the Gilbert Islands.

Brooke-Popham proposed that the "associated Powers" should send their own photo-reconnaissance aircraft over all the Japanese mandated islands, along the coast of French Indo-China and over other areas occupied by the Japanese. This received the prompt approval of the War Department and on 26th November MacArthur was notified that two Liberators equipped for high-altitude photography would leave for the Philippines within 48 hours. These aircraft would fly at high altitude to avoid interception but their crews were to "use every possible means of self-preservation" if attacked. The crews were to be briefed for reconnaissance over Jaluit in the Marshall Islands and Truk in the Carolines to

report on the location and strength of naval and military installations. The R.A.A.F. was advised by Brereton to expect the Liberators at Port Moresby and it seemed that the diplomatic barriers had at last been broken down so that some clear knowledge could be gained of what the Japanese really were doing in these strategic waters. But the departure of the two aircraft was delayed and then the War Department expressed a fear that the mission would prove impracticable because of the great distance to be flown. Still, on 5th December, one Liberator did reach Hawaii. Here it was decided that it should remain until "satisfactorily armed", and the promise of this urgently needed reconnaissance was not fulfilled.[8] And then, on 27th November, the War Department sent this crucial signal to the American commanders in the Philippines, Hawaii, Panama and the Western Defence Command (which included Alaska):

> Negotiations with Japan appear to be terminated to all practical purposes with only the barest possibilities that the Japanese Government might come back and offer to continue. Japanese future action unpredictable but hostile action possible at any moment. If hostilities cannot, repeat cannot, be avoided the United States desires that Japan commit the first overt act. This policy should not, repeat not, be construed as restricting you to a course of action that might jeopardize your defense. Prior to hostile Japanese action you are directed to undertake such reconnaissance and other measures as you deem necessary. But these measures should be carried out so as not, repeat not, to alarm civil population or disclose intent. Report measures taken. Should hostilities occur you will carry out the tasks assigned in RAINBOW 5 so far as they pertain to Japan. Limit dissemination of this highly secret information to minimum essential officers.[9]

MacArthur replied that everything was being put in readiness for a successful defence and that measures had been taken to extend and intensify reconnaissance patrols. Meanwhile two of his infantry divisions took up positions on the Lingayen Gulf and two on the Batangas coast. The Fortresses with their superior armament were to patrol the northern area including Formosa and the navy's Catalinas were to operate over southern waters and undertake long-range missions as far as the Indo-China coast. MacArthur ordered the crews of the Fortresses to keep "a legal distance" from Formosa, for, like Brooke-Popham in Malaya, he had been ordered very specifically to avoid an overt hostile act. Consequently he did not consider reconnaissance over Formosa "advisable" and missions were restricted to two-thirds of the distance between northern Luzon and southern Formosa. Later the range was extended to the international treaty boundary between the Philippines and Formosa.[1] Even so the flights that were made disclosed many Japanese transport and cargo vessels in harbours and at sea, and Japanese aircraft were seen in flight. Japanese aircraft appeared over Luzon itself in the last week of November although, until 2nd December, the American headquarters apparently had no knowledge of them. On this date an enemy aircraft was sighted

[8] Craven and Cate, Vol I, pp. 189-90.

[9] Reference to alarm of the civil population was omitted from the signal to MacArthur.—Craven and Cate, p. 190.

[1] Brereton, p. 35.

over Clark Field and fighter squadrons were ordered to intercept if any more appeared. On each of the next three nights a hostile aircraft was detected but attempts at interception failed.[2] Interceptor Command, with a radar set—one of only two then installed—"traced forces of strange aircraft estimated at from 9 to 27 bombers which came from Formosa down to within 20 miles of the shores of Lingayen Gulf".[3] The Americans had little doubt that these were Japanese aircraft, probably making trial navigation flights.

The urgency of the situation in the Philippines was now such that General Arnold signalled the commander of the Hawaiian Air Force, saying, "We must get every B-17 available to the Philippines as soon as possible." He wrote those words on 1st December. Five days later he was at Hamilton Field (San Francisco) supervising the departure of two squadrons of Flying Fortresses[4] on the long flight to Del Monte. The flight began that evening: the bombers were expected to reach Hawaii on the morning of 7th December.

On the night of 6th December the pilots of Interceptor Command at Nichols Field assembled to hear their commanding officer, Colonel George, assert that in his opinion war was "only a matter of days, possibly hours, away". At dusk on Sunday, 7th December,[5] the five squadrons of No. 24 Pursuit Group submitted their "status returns" showing 90 aircraft in commission—18 P-35's and the rest Kittyhawks. But the P-35's had been heavily overworked, their engines had deteriorated because of the heavy dust on the airfields, and their .30-calibre fuselage guns (they carried two .50 wing guns in addition) had been worn out in gunnery training. One Kittyhawk squadron had just received four new aircraft that day—aircraft that had not yet been airborne—and of the other 12 on its strength none had been flown for more than three hours. Thus the group had only 54 aircraft fit for combat. With the 33 Flying Fortresses of No. 19 Bombardment Group these fighters made up a total of 87 first-line aircraft to meet the enemy. Sixteen of the Fortresses had been sent to Del Monte on the night of 5th December. The men of No. 27 Bombardment Group who had arrived at Manila on 20th November had no aircraft. These had been loaded on ships in a second convoy which did not leave Hawaii until the first week in December. The tension was increasing but there was diversion on the night of 7th December when the officers of No. 27 Group gave a dinner in honour of General Brereton. Brereton slipped away from the dinner to confer with other senior staff officers from whom he learned that, in the opinion of the War and Navy Departments in Washington, war might break out at any moment. He then placed his force on "combat alert".

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[2] Craven and Cate, Vol I, p. 191.

[3] Brereton, p. 35.

[4] Nos. 38 and 88 Reconnaissance Sqns.

[5] To the west of the International Date Line calendar dates are 24 hours ahead of those recognised to the east of the line; thus Sunday 7th December, in the Philippine Islands was Saturday, 6th December, in Hawaii.

CHAPTER 9

DEGREES OF READINESS

AS in the Philippines, so in the Malay Peninsula, Borneo, the south-easterly sweep of the Dutch island possessions, Australia's Mandated Territory of New Guinea, Papua and the island-studded South Pacific; in each there was eleventh-hour activity. The Australian Chiefs of Staff were keenly aware of their responsibility for maintaining reconnaissance on a line across the eastern and northern approaches that would give early warning of Japanese naval and air movements. This line lay along the island screen that extended from New Caledonia, through the New Hebrides, the Solomon Islands, New Britain and New Guinea, to the Netherlands East Indies. Rabaul in the north and Noumea in the east were the defended points on which the more vulnerable and isolated units might fall back if the enemy pressed down on them, and from which Australian sea and air forces could cooperate with United States forces should they too be at war in the Pacific. The most easterly link between these forces would be Fiji. Port Moresby and Darwin would be defended as strongly as possible to secure the Coral and Arafura Seas, to retain bases from which air and naval forces could operate, and to support the Dutch forces in the East Indies.

Noumea, with a R.A.A.F. operational base defended by Free French forces, covered the right sector of this defence line. The centre sector—from the New Hebrides to the Solomon Islands—was covered from Tulagi, with flying-boat refuelling facilities at Vila, Buka and at Soraken on Bougainville. The left sector, formed by New Britain, New Ireland and the Admiralty Islands, had Rabaul, with its air base and safe anchorage, for its strongpost, and there were flying-boat facilities at Kavieng (where there was also a land-plane refuelling base), and at Lorengau in the Admiralty Islands. Rabaul had ranked as an operational base since December 1940, chiefly to control the flying-boat searches for enemy shipping. On the New Guinea mainland, Salamaua, which provided a safe sea anchorage, and Lae had been developed as bases with subsidiary bases at Morobe, Madang and Wewak. In Papua, Port Moresby provided the main facilities for the navy, army and air force. The Coastwatching organisation had its stations throughout the islands and territories, the watchers reporting by radio-telephone to naval Intelligence officers at Tulagi, Rabaul or Port Moresby. For its own communications R.A.A.F. Headquarters had wireless-telegraph links with Noumea, Vila, Tulagi, Rabaul and Port Moresby, and high-frequency direction-finding stations permanently manned at Vila, Salamaua and Port Moresby.

The planning was impressive but the sum of the resources was small. The total strength of the R.A.A.F. in first-line operational aircraft available in the Australian area in the first week in December 1941 was only

about 180, and the types were not very formidable, the best being Hudsons, Catalinas and Empire flying-boats. The second-line reserve numbered fewer than 200, all of them subject to armament deficiencies; and there was a reserve of unclassified aircraft—108 Ansons—which were used mainly for training and were also deficient in armament.[1] Responsibility for war operations along the outer island defence line rested with 11 flying-boats—7 Catalinas of No. 20 Squadron and 4 Empire flying-boats of No. 11 Squadron. The operational bases in Papua and the Mandated Territories were staffed on a skeleton basis with an Intelligence officer (who was usually the officer commanding), signals staff, a small marine section for tending the flying-boats that used the bases, and a stores clerk—an average strength of 18.

On 1st December the Air Board ordered that a flight of Hudsons from No. 24 Squadron should stand by at 36 hours' notice prepared to move to Rabaul.[2] Two days later, apparently because there was some indication that the international situation had eased, this notice was extended to 72 hours, but on 5th December three Hudsons from the squadron flew to Port Moresby and on 7th December they moved to Rabaul, where a fourth Hudson joined them on the 8th. The squadron was commanded by Squadron Leader Lerew;[3] at Rabaul the advanced operational base had been commanded since 2nd December by Flying Officer Robinson[4] who was also representative of Northern Area Headquarters on the Combined Defence Headquarters there.

In the "Near North" the R.A.A.F. was also committed, by its agreement with the Dutch, to providing air support for certain Dutch bases: at Namlea on Buru Island; at Halong, a Dutch naval and flying-boat base, and at Laha, both on Ambon Island; and at Koepang, the capital of Dutch Timor. A watching brief over Dili, the capital of Portuguese Timor, would also be undertaken. On 3rd December the Australian War Cabinet gave its approval to the dispatch of advance parties of R.A.A.F. units to the various bases as planned. Australian ground staff were flown to Koepang, Laha, Halong and Namlea by flying-boat on 6th December,[5]

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[1] The first-line aircraft state on 1st October 1941 was: 56 Hudsons, 96 Wirraways, 16 Catalinas, 8 Seagulls, 4 Empire flying-boats—total, 180. On 9th December 1941, the next date for which a full aircraft state was prepared, aircraft available for operations in the Australian area and the Netherlands East Indies were: first-line—53 Hudsons, 101 Wirraways, 12 Catalinas, 9 Seagulls—total, 175; second-line—72 Fairey Battles, 108 Wirraways, 18 Ansons—total, 198. With 108 unclassified Ansons the grand total on 9th December was 481.

[2] In November 1941 the squadron had an unusual mixture of aircraft: 5 Hudsons, 11 Wirraways, 3 Moth Minors and 1 Fairey Battle. (2 more Wirraways had been allotted but were not yet delivered.)

[3] Gp Capt J. M. Lerew, DFC, 73. Comd 24 Sqn 1941-42, 32 and 7 Sqns 1942, 1 AD 1943; OHQ, London 1944; Dir Flying Safety 1945. Regular air force offr; of Melbourne; b. Hamilton, Vic, 20 Aug 1912.

[4] Sqn Ldr W. H. Robinson, 272576. RAAF Stn Port Moresby, COIC North-Eastern Area HQ and COIC GHQ Brisbane; comd AOB and AOC's Representative Combined Defence HQ Rabaul 1941-42; Intell Offr Operations Port Moresby 1942, 71 Wing 1943-44, 74 Wing 1944; ILO Air Staff RAAF Cd 1944-45. Public servant; of Port Moresby; b. Whitchurch, Shropshire, England, 22 Jun 1898.

[5] Nineteen officers and men to Koepang, 30 to Laha, 15 to Halong and 16 to Namlea. These detachments had, in fact, been preceded by three communications parties of 5 men each who, in August, had been flown, one to Koepang, one to Ambon and one to Namlea. At the end of September each of these parties, whose members all wore civilian clothes to avoid military appearance, was joined by an Intelligence officer and several additional airmen.

and at dawn on the 7th December six Hudsons (two flights) from No. 13 Squadron commanded by Squadron Leader McDonald,[6] who had succeeded Squadron Leader Balmer as the unit's commander, left Darwin for Laha, followed by further ground staff in a second flying-boat. The operations control staff took up duty at an Area Combined Headquarters established at Halong while the Hudsons immediately assumed operational status at Laha on the opposite side of Ambon Bay. On the same day that the flights from No. 13 Squadron left for Ambon Island, a flight of four Hudsons from No. 2 Squadron arrived at Koepang from Laverton, by way of Darwin, with Flight Lieutenant Cuming[7] in charge.

The situation in Borneo was also giving the British and Dutch much reason for concern. Denial of Kuching in south-western Sarawak was a principal Anglo-Dutch objective. If Kuching fell the enemy would be within striking distance of the Dutch airfields in north-western Borneo. Kuching airfield was being developed to accommodate bombers, and flying-boat moorings had been laid in the river near by. There was also a landing-ground at Miri on the Sarawak coast 75 miles south-west from Brunei town; at and near Miri were rich oilfields. Air Chief Marshal Brooke-Popham had informed the Governor of North Borneo that his territory and the island of Labuan, where there was a cable and wireless station, could not be defended. At Seria, in the State of Brunei, there was another oilfield which, with the Miri field, supplied the refineries at Lutong in Sarawak. Though an effort was made to disperse the limited number of troops available—one battalion of the Indian Army—to provide some effective defence, Brooke-Popham finally decided that it would be useless to attempt to defend either the oilfields or the refineries. The alternative was to deny them to the enemy by demolishing them.

Reconnaissance aircraft, "unidentified" though of obvious origin, sighted over Kuching, had already given proof of Japanese interest in this area, and when, on 28th November, Lieut-General Percival, the General Officer Commanding in Malaya, visited Kuching, he was asked pointedly where the British aircraft and anti-aircraft defences were. The best he could do, he admitted later, was to promise to send "a few anti-aircraft guns" and try to encourage the residents with an assurance that British warships would reach Singapore within a few days.[1] Apart from this faint hope Kuching had only the headquarters group of the Indian battalion to defend it, and the promise of a defence system at the airfield, construction of which, though planned, was not begun until late in the year; in the first week in December it was still unfinished.

In Dutch Borneo, Singkawang airfield, one of the two Dutch bases allocated to the R.A.F., which was to move two bomber squadrons to

[6] W Cdr J. R. G. McDonald, 86. Comd 13 Sqn 1941. Regular air force offr; of Brighton Beach, Vic; b. Caulfield, Vic, 24 May 1915. Killed in action 10 Dec 1941.

[7] F-Lt R. W. B. Cuming, 200540. 2 Sqn. Chemical engineer; of Adelaide; b. Adelaide, 5 Mar 1911. Killed in action 20 Jan 1942.

[1] Percival, *The War in Malaya*, p. 94.

each base, was ready for occupation in the first days of December and a R.A.F. ground staff detachment had been flown in. This base was not at Singkawang proper, which was a vulnerable town on the coast, but, known as Singkawang II, was located 60 miles inland and 30 miles from the Sarawak border. Its importance lay partly in the fact that a Dutch-manned wireless station there maintained communications between Singapore and Kuching, but, more particularly, that it was only about 350 miles from Singapore and from Sunda Strait between Sumatra and Java, through which Allied reinforcements must pass. Should the Japanese gain this air base the security of Singapore and the Netherlands East Indies would be greatly endangered. To the Dutch troops in Borneo, Singkawang II was thus a key defence point, and fortifications were built on roads approaching it and demolitions prepared. Samarinda on the east coast of Dutch Borneo, the site for the second R.A.F. base, was not ready for R.A.F. occupation.

In Singapore at this time Brooke-Popham was assessing information he had just received that four cruisers and several destroyers had been detached from the Japanese Combined Fleet and sent to the South China Sea, and that two squadrons of long-range Zero fighters had reached south Indo-China. "What we were particularly on the look-out for," he wrote in his despatch later, "was any indication of the movements of long-distance bombers or of the Zero-type fighters with detachable petrol tanks" —a statement which suggests a concern felt about the Zero that was not evident when, only a few weeks before, in Australia, he had vouched for the superiority of the Buffalo; and a reminder, perhaps, that campaign despatches are written *after* the fighting. But, whether or not he had now come to recognise the truth of the gospel which Major Chennault had been trying to preach for so long (and he had several times conferred with Chennault), what really mattered to him was that he had to make the best possible use of the aircraft he had. One serious limitation in the air was the lack of long-range reconnaissance. Brooke-Popham was anxious to send reconnaissance aircraft over Camranh Bay on the east coast of Indo-China, where it was reported the Japanese were engaged in suspicious naval activity. The R.A.F. Catalinas were slow and too vulnerable for such operations and so General MacArthur was asked to provide Flying Fortresses from the Philippines. MacArthur replied, however, that he regretted that his orders from Washington prohibited such operations; like Brooke-Popham he was under a heavy obligation to avoid any overt act of war.

The number of Japanese aircraft in Indo-China had risen, it was estimated, from 74 at the end of October to 245 at the end of November. The Chinese had reported that the *5th Japanese Division*—highly trained in landing operations—had moved to south Indo-China and that there had been large movements of motor-landing craft from central China, though the destination of these craft were not known. The War Office informed Brooke-Popham that United States Army commanders in the Far East had been informed from Washington that the negotiations being

conducted with the Japanese envoy might break down at any time and that Japan might then begin an air offensive against Thailand, the Netherlands East Indies or the Philippines. In retrospect this information has three points of interest: the roundabout route by which it reached



Singapore; Brooke-Popham's only comment (in his despatch) that, up to the receipt of this telegram "we had remained completely in the dark on this matter except for press reports";[2] and, finally, the omission of Malaya from the list of likely objectives for a Japanese air assault.

But the darkness which surrounded the Commander-in-Chief was not confined to lack of information from the War Office; there was a disturbingly-apt physical simile in the thick monsoon weather which now hung over the Gulf of Siam and the South China Sea for the greater part of

[2] Brooke-Popham, Despatch, para 95.

each day. By agreement made some months earlier between the Far East Command and the Dutch Command in the Netherlands East Indies, the South China Sea approach, which was regarded as the real danger zone, was divided into two reconnaissance areas. The R.A.F. was responsible for that bounded by a line from Kota Bharu, north-east to Cape Cambodia on the southernmost tip of Indo-China, thence south-eastward to Great Natuna Island and then, on a westerly course, back to Malaya, ending at Kuantan. The Dutch Naval Air Service undertook to provide a flying-boat group of three Catalinas, based on Seletar, Singapore Island, which would be responsible for reconnaissance within an area bounded by a line from Singapore to Kuantan, thence to Great Natuna Island, on to Kuching in western Sarawak, Borneo, and back to Singapore. To ensure an overlap on the boundary between the two areas No. 205 Squadron R.A.F. (the only flying-boat squadron in the Far East Command) would operate three Catalinas, also from Seletar.[3] In July, after the Japanese had occupied Indo-China, Air Headquarters had emphasised the complete lack of reconnaissance over the Gulf of Siam, but General Headquarters had ruled that the limited reconnaissance force available must be concentrated on the area through which the approach of an enemy force was most probable. The two R.A.A.F. Hudson squadrons, No. 1 commanded by Wing Commander Davis[4] and No. 8 by Wing Commander Wright, were allotted responsibility for the R.A.F. area. Their search plan, designated the "Initial Reconnaissance Plan", which had been prepared in October by Group Captain McCauley in consultation with the two Australian squadron commanders, had been approved by Air Headquarters in readiness for action when ordered. This provided for daily sorties which, it was hoped, would detect any enemy seaborne task force while still beyond night steaming range of the coast—approximately 180 nautical miles. The purpose was to provide sufficient time to send out striking forces to attack in daylight in the hope that the enemy would be either destroyed or turned back.

In an appreciation dated 22nd November, Brooke-Popham's headquarters had expressed the opinion that Japan's next move would be from southern Indo-China against Thailand rather than from northern Indo-China against the Burma Road. But the possibility of a "gambler's throw" against Malaya, or even Singapore itself, was not disregarded and Air Headquarters was ordered to be ready for Operation MATADOR at 72 hours' notice. "Norgroup" was duly formed at Kuala Lumpur on 24th November as planned, its commander being Wing Commander Forbes,[5] R.A.F., whose

[3] The squadron maintained only 3 Catalinas at Seletar as it had also to provide a detached flight based on Ceylon for service over the Indian Ocean. In September-October 1941 two crews from this detachment were lost in flying accidents and as crews had to be trained by the squadron itself their loss was particularly severe.

[4] Gp Capt R. H. Davis, OBE, 67. RAAF LO AHQ RAF Far East 1940-41; comd 1 Sqn 1941-42. Regular air force offr; of Archerfield, Qld; b. Sydney, 8 Apr 1912.

[5] Gp Capt R. G. Forbes, 24077, RAF. Air HQ Far East 1940-41; comd RAF Stn Alor Star 1941; Fleet Aviation Offr with C-in-C Eastern Fleet 1942-43; comd Combined Operations Room, Bombay, 1943-44, RAF Stn Skellingthorpe 1944-45. Regular air force offr; of Dundee, Scotland; b. Dundee, 9 Jan 1907.

task was to control all air units in that area. On 28th November a report from Saigon that the Japanese intended to land troops in southern Thailand on 1st December was passed by General Headquarters to Air Headquarters with the comment that it was given no great credence. It was assumed by General Headquarters that such a force, if dispatched, would anchor off Nakhorn, or between Singora and Patani, on the south-east coast of Thailand, on the morning of either 30th November or 1st December. On 29th November the full Initial Reconnaissance Plan was ordered, but Brooke-Popham, fearing that the Japanese might hold out a bait in an attempt to induce his forces to strike first and so place Britain in the role of the apparent aggressor, thereby losing American sympathy, observed the decree of the British Chiefs of Staff and ruled that "a striking force will not be ordered to attack the convoy if found". Notice for MATADOR was shortened from 72 hours to 12 hours and the Dutch Catalina group arrived at Seletar to take up its station for reconnaissance operations over the southern search area as arranged. On this day No. 1 Squadron reported "nil sightings" on its searches over the South China Sea up to the approaches of Cape Cambodia.

To provide for coordinated action, three degrees of readiness were laid down by General Headquarters: the third degree of readiness was the then existing war state of the command; the second—to be assumed if the international situation deteriorated so far that it was justified—required all units to be ready to operate at short notice; the first would call for readiness for immediate operations with all units prepared for enemy air attack without warning.

The Australian contribution to the air defences of Malaya amounted to about one quarter of the total squadron strength. By 28th November No. 21 Squadron had moved to Sungei Patani in north-western Malaya close to the Thai border to be in readiness to support MATADOR should it be ordered. Though technically serviceable and fully equipped, its efficiency was still below standard; the new Buffalo aircraft were giving considerable trouble and the physical conditions in which the squadron lived and worked were far from satisfactory.[6] The rainy season had made the airfield extremely boggy and, as all maintenance work had to be done in the open, the aircraft serviceability was poor. There was no air raid warning system at the station—not even the "spotter" organisation for the visual detection of approaching enemy aircraft was effective. Plans for airfield defence had not been completed—the anti-aircraft defences consisted

[6] The squadron commander (Sqn Ldr Allshorn) later reported on these two disabilities. He stated that the undercarriage of the Buffalo gave frequent trouble by sticking in the locked position; even the manual release device was not efficient. The aircraft's four .50-inch guns, two of which were synchronised to fire through the propellers, were affected by corrosion and rusting in the electrical system which meant that the squadron "never had efficient armament". Of conditions on the station Allshorn reported that transport allotted to the squadron was not issued to it and as the officers and airmen were housed on the opposite side of the airfield to the messes, they had to walk two miles and a half each way to and from their meals which caused inconvenience to the squadron's daily routine and affected its morale. Maltby, in his despatch on the campaign, stated that the standard of gunnery in all fighter squadrons was low for the following reasons: (*a*) too few and too slow target towing aircraft, (*b*) lack of cine-gun equipment, (*c*) continual trouble with the .5 gun and synchronising gear. Though by October this was largely overcome by local modification, many pilots were still not altogether confident about their armament.

of only four Bofors guns, which gave some defence against low-flying attacks but left the station open to medium and high-level bombing without interference from the ground.

The second Australian fighter squadron, No. 453, was still based on Sembawang where it had been allotted a share in the defence of Singapore. Its commanding officer, Squadron Leader Harper, had gone to Australia late in November seeking "more suitable" pilots. Maltby, in his official despatch, said that "some of the personnel were not entirely suitable for a fighter squadron".[7] Flight Lieutenant Vigors,[8] R.A.F., a flight commander from No. 243 Squadron R.A.F., was temporarily in command.

By 1st December reports of continued Japanese military development in south Indo-China, together with pressure by the Japanese on Thailand, were becoming more ominous, and the uneasy state of the negotiations in Washington combined to convince Brooke-Popham that a further step in general preparedness was necessary. The second degree of readiness was ordered; specific instructions were given that all vulnerable points were to be guarded and the Malayan Volunteers were mobilised.

A day later the British battleship *Prince of Wales* and the battle cruiser *Repulse* steamed into Singapore Harbour, a majestic sight which stirred watchers to feel that at last the great naval base would be justified by the presence of at least two capital ships of the Royal Navy, taking their rightful place in the defence of Malaya. It had been intended that the aircraft carrier *Indomitable* should be included in the Eastern Fleet but an accident temporarily disabled her and the capital ships were left dependent for protection against air attack on land-based aircraft, which were inadequate in number and in range, and on their own armament, which has since been described as "quite inadequate".[9] Mr Churchill has written of *Indomitable* as "an essential element" and of the transfer of the two capital ships to the Far East, saying that it was decided to let them "go forward in the hope of steadying the Japanese political situation, and also to be in relation to the United States Pacific Fleet".[1]

Admiral Sir Tom Phillips,[2] who was in command of the Eastern Fleet, had left his flagship *Prince of Wales* in the Indian Ocean on the way to Malaya and had flown to Singapore for urgent staff conferences there. There he made it clear that he was not happy about the composition of

[7] Harper's reasons were more emphatic and critical than Maltby's careful choice of words suggest. The truth was that the squadron was not a happy unit. When Harper reached Australia the CAS (Air Chief Marshal Sir Charles Burnett) promptly ruled that his quest was in vain.

[8] W Cdr T. A. Vigors, DFC, 33554, RAF. 226, 222 and 243 Sqns RAF; comd 453 Sqn 1941-42, SHQ RAF Stn Yellahanka (ACSEA), 1944. Student; of Fethard, Co. Tipperary, Ireland; b. Hatfield, Herts, Eng, 22 Mar 1921.

[9] "It was already being realised in the Navy that if warships were to do any good with anti-aircraft gunfire they needed four or five times the number of guns they had at the outbreak of war. Nor were the anti-aircraft crews of the *Prince of Wales* and *Repulse* well trained . . . not having had the facilities for . . . practice for a long time. . . ."—Russell Grenfell, *Main Fleet to Singapore* (1951), p. 96.

[1] Churchill, *The Second World War*, Vol III, p. 524.

[2] Admiral Sir Tom Phillips, KCB; RN. HMS's *Bacchante* 1915, *Lancaster* 1916-19. Vice-Chief of the Naval Staff 1939-41; C-in-C Eastern Fleet 1941. B. 19 Feb 1888. Lost in sinking of *Prince of Wales* 10 Dec 1941.

his fleet, and he sent signals to the Admiralty asking for additional battleships. This request was denied by Mr Churchill who had already demonstrated his own views on the subject by insisting that the Eastern Fleet should be composed of a small force of fast ships.

Soon after the arrival of these warships No. 453 Squadron was formally made responsible for fighter protection of the Eastern Fleet. One of the squadron's flights was to be based temporarily at Kota Bharu and another at Kuantan so that air cover might be provided for naval vessels at any point along the east coast of the peninsula. The date fixed for the movement of these flights to their respective bases was 8th December.

Of the other two Australian squadrons, No. 1 had already begun its important reconnaissance task from Kota Bharu where it had been based since August. No. 8 was still at Sembawang when, on 1st December, the second degree of readiness was ordered. Standing Orders provided for the movement of the unit to Kuantan when this degree was assumed so that the two Australian reconnaissance squadrons might combine to put the Initial Reconnaissance Plan into operation. Lack of air transport so delayed the transfer of No. 8 that it was not until 4th December that eight Hudsons and an advance party which travelled by road had reached their new base while the bulk of the ground staff and much equipment was still on the way north by sea. The other four aircraft remained as a detached flight at Sembawang where the squadron's commander, Wright, was acting as station commander in the temporary absence of McCauley in the Middle East. At Kuantan the squadron was temporarily commanded by Squadron Leader Henderson.[3] The lack of air transport which hampered the movement of No. 8 Squadron was a serious weakness in the over-all air defence system in Malaya. Air Headquarters had pleaded several times for transport aircraft but none had been provided from R.A.F. resources. The best that could be done was to accept the offer of the Dutch Army Air Service, which had a fleet of about 20 Lockheed Lodestars, to provide aid "as circumstances permitted".[4]

Despite all preparations, it was still disturbingly true that, as Maltby declared later,

> by December 1941 the R.A.F. Far East Command was not yet in a position to fulfil its responsibility of being the primary means of resisting Japanese aggression. The calls of the war in Europe (he wrote in his despatch) had allowed it to develop only a fraction of the necessary strength. Re-equipment of squadrons had not taken place and was not likely . . . in the near future; Vickers Vildebeestes were still our main striking strength. Buffalo fighters had arrived, it is true, but their performance

[3] Gp Capt A. D. Henderson, OBE, 217. 6 and 8 Sqns; Staff Offr Operations Western Area and comd 7 Sqn 1942; Staff Offr Operations North-Western Area 1942-43; comd 459 Sqn 1943-44, 454 Sqn 1944-45. Regular air force offr; of Bathurst, NSW; b. Randwick, NSW, 15 Mar 1915.

[4] The scene at Kuantan about this time as depicted by Roy Bulcock in *Of Death But Once*, p. 35, was far from encouraging: "The wet season," he wrote, "had set in. Apart from the landing strip, the aerodrome was a quagmire and the trucks we had for refuelling aircraft would bog down to the axles in a few minutes. The four old five-hundred-gallon tankers towed by tractors could not possibly cope with the three octanes necessary for the various aircraft passing through, and they still had to be refilled from the bulk supply near the town. The impossible position was explained to AHQ and modern tankers promised but it was too much to expect that they would arrive immediately."

and armament were disappointing, and inexperienced pilots were still being trained to man them. The aerodromes in northern Malaya on which so much was to depend, especially during the early stages of the war, had none of the prerequisites of secure air bases for occupation in the face of the enemy. The number of fighters available was very inadequate for providing effective fighter cover. Both heavy and light A.A. guns were quite insufficient. Dispersal arrangements for aircraft and their protection from blast were not as complete as was planned. And, in the absence of an adequate air raid warning system, the aerodromes were open to surprise attack.[5]

In manpower the strength of Far East Command R.A.F. had doubled in the last six months of 1941, but most of the reinforcements had come direct from training establishments, and, since tour-expired airmen were relieved whenever possible, the result was that by December 1941 three-quarters of the air force were comparatively new to Malaya. Early in December six of the long-sought Australian-made Beaufort bombers reached Singapore. Delight at their arrival changed to disappointment when it was found that they were unarmed and that their crews had received no operational training; two disabilities with which the command was least able to cope. Pulford and Brooke-Popham conferred and decided that all but one of these coveted Beauforts must be sent back to Australia. The single aircraft was retained by Far East Command Headquarters in the hope that it might be used for photo-reconnaissance work—a most pressing need. While the command not only lacked suitable aircraft for long-range reconnaissance, but was taking great care to avoid "provoking" a potential enemy, the Japanese were sending aircraft on frequent reconnaissance missions over Borneo and Malaya and had in fact been doing so since October. In the hope of curbing such activities over Malaya a section of two Buffaloes from No. 243 Squadron R.A.F. was stationed at Kota Bharu. On 3rd December two large unescorted cargo ships were sighted but no action against them was taken and they were not reported, at least as such, again.

The weather, of immense consequence in any military campaign and particularly in air operations, was now of crucial importance. The north-east monsoon (October to March) had brought a cycle of chiefly fine mornings, rainy afternoons and clear nights, with intermittent, unpredictable and violent storms and bad visibility, particularly over the sea. This was weather which made the movement of vehicles and aircraft on the ground almost impossible except on properly constructed roadways and runways. It was weather which Brooke-Popham had hoped might defer a Japanese southward thrust but which in fact now created conditions favourable to a seaborne assault in that it provided low cloud cover for the assembly, movement and approach of enemy convoys. At Kota Bharu, as at other airfields in northern Malaya, the monsoon deluge had turned the airfield into a morass so that for two days, 4th and 5th December, all aircraft were grounded. Meanwhile the searches by Hudsons of No. 8

[5] Maltby, Despatch, paras 132-34. In trying to assess Maltby's awareness of the state of the command at this time it is necessary to recognise that the report from which this quotation is taken was not submitted until July 1947—five years and a half after the event.

Squadron and the Dutch Catalinas produced no information. At 10.30 a.m. on 6th December three Hudsons from No. 1 Squadron managed to get off the water-soaked runway at Kota Bharu to search the three sectors allotted to the unit. At 12.15 p.m. Flight Lieutenant Ramshaw,[6] captain of the Hudson searching No. 1 Sector, sighted three Japanese vessels—a motor ship, a minelayer and a minesweeper, he decided—185 miles from Kota Bharu, on a bearing of 052 degrees and a course of 340 degrees. A quarter of an hour later Ramshaw recorded a second sighting; this time a force of one battleship, 5 cruisers, 7 destroyers and 22 transports, 265 miles from Kota Bharu, steering due west towards it.[7] As Ramshaw and his crew were checking this formidable force they saw a float-plane catapulted from one of the warships. Prudently the Australian pilot took cover in the clouds and signalled his news to base.

At 12.45 p.m., just a quarter of an hour after Ramshaw's second sighting, Flight Lieutenant Emerton,[8] the captain of the Hudson searching Sector No. 3, reported sighting a comparably large force bearing 072 degrees, 360 miles from Kota Bharu and on the same course as that reported by Ramshaw who, meanwhile, had sought permission to remain and shadow the Japanese force until relieved. This request was refused and he was ordered to continue his patrol.[9]

When they returned to their base both reconnaissance crews who had reported the Japanese force were closely interrogated by Intelligence officers. From this interrogation it was assumed that, despite discrepancies in the positions given and the fact that neither Hudson crew had sighted the other, they had in fact both reported the same force.[1] In Singapore the staff of the Combined Operations Room did not agree. Their interpretation, and the one Brooke-Popham accepted, was that there were two large forces, one slightly ahead of the other, steaming to a destination that could, as yet, only be guessed at. Emerton's sighting was taken to have been 2 cruisers, 10 destroyers and 21 transports. Since it seemed that the first and smallest force (reported by Ramshaw) had rounded Cape Cambodia and was heading north-westerly into the Gulf of Siam, the other forces might be following it. A Japanese aircraft had taken off from one of the ships, apparently in an endeavour to intercept Ramshaw's Hudson, so there appeared to be no doubt that the Japanese knew

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[6] F-Lt J. C. Ramshaw, 552, 21, 2 and 1 Sqns. Regular air force offr; of Malvern, Vic; b. Bangalore, India, 18 Oct 1914. Killed in action 8 Dec 1941.

[7] All sightings are in nautical miles, and bearings and courses are measured from the "true" or geographic north.

[8] W Cdr J. G. Emerton, 250283. 1 Sqn; comd 30 Sqn 1943, 22 Sqn 1943-44. Salesman; of Auburn, Vic; b. Mont Albert, Vic, 6 Nov 1917. Killed in action 30 Jan 1944.

[9] Brooke-Popham, in his despatch, refers to the two Hudsons as being at the limit of their patrolling range which "made it impossible for them to remain in contact until relieved". In the absence of any documentary evidence the best recollection of members of the squadron is accepted here. Both aircraft had been airborne for less than three hours. Allowing three hours for return to base, it can be assumed that either or both Ramshaw and Emerton could have remained to shadow the convoy until relieved. The aircraft they were flying had a safe endurance of approximately eight hours and a maximum endurance of nine hours.

[1] Crews of the Hudsons which made the initial sightings were: F-Lt Ramshaw (captain), F-O D. A. Dowie (observer), Sgts J. W. Gillan and L. C. Kennedy (gunners); F-Lt Emerton (captain), F-Lt A. H. Brydon (observer) and Sgts L. H. Shore and F. M. A. Apps (gunners).

that they had been detected and this might cause them to alter course. Thus Brooke-Popham had now to make his most crucial decisions.[2]

Bearing in mind the policy of avoiding war with Japan if possible (he wrote in his despatch)—a policy which had been reaffirmed by the Chiefs of Staff as recently as the 29th November—and the situation in the United States with the Kurusu talks still going on in Washington, I decided that I would not be justified in ordering "Matador" on this information, but orders were issued to bring all forces to the first, i.e., the highest, degree of readiness. I also impressed upon the Air Officer Commanding the urgent necessity for maintaining contact with the convoy, a point which he had already realised.[3]

Transmission of signals between base and headquarters and interpretation of the various reports necessarily occupied precious time and it was not until 4.20 p.m. that another Hudson, commanded by Flight Lieutenant Smith,[4] took off with orders to try to locate and shadow the Japanese force, but this search failed to reveal any trace of the convoy and the day ended with General Headquarters and Air Headquarters still striving to answer the riddle set by the Japanese. The first degree of readiness was ordered throughout the command and at 6.30 p.m. a Catalina from No. 205 Squadron R.A.F. took off from Singapore to make a night search. Meanwhile Air Headquarters had been receiving reports of Japanese reconnaissance aircraft over Malaya at various points. General Headquarters ordered that no offensive action should be taken by British fighters, but anti-aircraft batteries were ordered to open fire on any unidentified aircraft. Seven Vildebeestes of No. 36 Squadron R.A.F. were hurriedly loaded with torpedoes and sent to Kota Bharu whence, to avoid congestion on the airfield, they were diverted to the adjacent airfield at Gong Kedah and held in readiness for a possible strike.

Scrutiny of all reports received strengthened the belief at G.H.Q. that the Japanese force had in fact turned north-westward into the Gulf of Siam and thus out of the prescribed reconnaissance area, though the inability of Smith to find any ships might well have been attributable to the extremely poor visibility.

Air Headquarters then became concerned about the absence of any reports from the searching Catalina and a second flying-boat from the same squadron was sent out, the captain being instructed to search to the westward of Cape Cambodia if, on reaching that position, he had not made contact with Japanese ships. This plan was to cover the possibility that the Japanese force might have anchored off Koh Kong Island on the west coast of Indo-China just south from the Thai border. Later it was confirmed that this second Catalina was shot down by the Japanese who, in doing so had, perhaps, committed the first act of war between Japan and the British Commonwealth. The first Catalina to go out was presumed lost.

[2] It has been asked why, since the decision to move into Thailand was basically a political one, this responsibility was not borne by Mr Duff Cooper whose appointment as British Cabinet representative in the Far East might well seem to have been made for just such a purpose.

[3] Brooke-Popham, Despatch, para 98.

[4] F-Lt K. R. Smith, DFC, 290514. 1 Sqn. Audit clerk; of Perth, WA; b. Marble Bar, WA, 4 Oct 1916.

Early on 7th December the Dutch Catalinas, the remaining Catalina of No. 205 Squadron at Seletar and Hudsons from No. 8 Squadron, were ordered to continue the set reconnaissance plan covering the more direct approach to Singapore for, as Maltby wrote in his despatch, a successful landing in the Mersing-Endau area would have "greatly jeopardised the army in northern Malaya and might have threatened Singapore itself before the army could come to its defence". But the orders to No. 1 Squadron on the same day were for a special sweep over the Gulf of Siam. At 6.45 a.m. on 7th December, therefore, three of these Hudsons again took up the search. Rain and low clouds forced two of them to return and the pilot of the third sighted nothing. Later in the day the single Beaufort photographic reconnaissance aircraft which had been sent to Kota Bharu for the purpose took off to make a search, but it returned in two hours and a half, its crew defeated by the heavy monsoon weather. Fresh news came when a report was received at 3.45 p.m. from a Hudson of No. 8 Squadron that it had intercepted a Japanese merchant ship steaming south with "a large number of men on deck in khaki". Two Hudsons from No. 1 Squadron were immediately sent out to search to the north of the position at which this vessel was sighted. Flight Lieutenant Douglas,[5] the pilot of one of these aircraft, reported four large vessels steaming almost due south in a position about 60 miles north from Patani at the southern base of the Kra Isthmus. Night had fallen by the time Douglas made this sighting and he was unable to describe the force with certainty; he thought it comprised a cruiser and three transports. The second Hudson, piloted by Flight Lieutenant Lockwood,[6] also signalled that at 5.50 p.m. the crew had sighted a cruiser and a motor-ship 112 miles from Kota Bharu, on a bearing of 009 degrees and a course of 270 degrees. The cruiser opened fire on the Hudson which took successful evasive action. Both the forces sighted appeared to be making the best possible use of "line squalls"—the particularly turbulent conditions customarily found on a monsoonal weather "front".

Air Chief Marshal Brooke-Popham's own account of the sightings on 7th December varies to an important extent from that by Air Vice-Marshal Maltby and the squadron records. His recollection is that no positive information was received from searches in the Gulf of Siam on this date "until the evening, when a report was received that a Hudson had seen through low clouds three small Japanese ships which were then passing Singora and heading south".[7] This information, he has recorded, reached him at 9 p.m. After a senior staff conference he decided not to order MATADOR, his chief reason being that it was unlikely that he would have the 24

[5] F-Lt J. K. Douglas, DFC, 260280. 21 and 1 Sqns. Bank clerk; of Orange, NSW; b. Orange, 5 Jan 1917. Killed in action 14 Feb 1942.

[6] F-Lt J. A. H. Lockwood, 554. 21, 2 and 1 Sqns. Regular air force offr; of Geelong, Vic; b. Geelong, 23 Dec 1919. Killed in action 14 Feb 1942.

[7] Brooke-Popham, Despatch, para 98. Subsequent destruction of records in Malaya has made it impossible to analyse precisely the reconnaissance reports for 7th December in terms of the composition of the forces sighted, their positions and the times of sighting. Unless otherwise indicated, the information used is derived from the recollection of members of the RAAF squadrons concerned.



Far East Command R.A.F., 7th-8th December 1941

hours' time advantage required should the ships prove to be part of a Japanese expedition. Since there could be no certainty that the Japanese were about to attack and since the British Minister to Thailand had more than once emphasised to him the seriousness of the consequences should he be the first to break Thai neutrality, Brooke-Popham's problem was very grave, and he was still further restrained by the Chiefs of Staff ruling that, until the Japanese had actually committed some definite act of hostility against the United States, the Netherlands or the British Commonwealth, he was not permitted to attack a Japanese expedition at sea. As an indication that there was some offset to the extreme gravity of this situation there is Maltby's statement that, with the command standing by in the first degree of readiness on the night of 7th-8th December, "there was no undue alarm owing to G.H.Q's view that the Japanese expedition was directed against Siam".[8] It is noteworthy that apparently neither Brooke-Popham nor his staff officers attached any significance to the fact that the Japanese convoy had a very strong naval escort, from which fact it might be argued quite reasonably that its destination was Malaya; it was surely improbable, as has since been pointed out, that such an escort would have been used for an operation against Thailand, which, for that matter, could well have been occupied by Japanese land forces moving across the border from Indo-China.[9]

On 7th December the troops under General Percival's command included 10 infantry brigades. The III Indian Corps, including the 9th and 11th Indian Divisions (each of two brigades) and the 28th Brigade, was responsible for the defence of Malaya north of Johore and Malacca. The 8th Australian Division (two brigades) defended Johore and Malacca. The Singapore Fortress troops included two brigades in which were three of Percival's six British battalions. The 12th Indian Brigade formed the command reserve.

The operational strength of R.A.F. Command in Malaya on 7th December was disposed thus:

SINGAPORE ISLAND

Base	*Unit*	*Type*	*Aircraft*
Seletar	No. 205 Sqn RAF	Catalina (flying-boat)	31
	No. 100 Sqn RAF	Vildebeeste (torpedo-bomber)	6
	Dutch Group	Catalina	3
	Photo-Reconnaissance Flight RAF	Buffalo	2
Tengah	No. 34 Sqn RAF	Blenheim IV (bomber)	16
Sembawang	No. 453 Sqn RAAF	Buffalo (fighter)	16
	No. 8 Sqn RAAF	Hudson (General reconnaissance)	4
Kallang	Nos. 243 RAF and 488 RNZAF Sqns	Buffalo	30

[8] Maltby, Despatch, para 168.
[9] Grenfell, p. 102.
[1] Two of these aircraft failed to return from operational sorties on 7 Dec 1941.

NORTHERN MALAYA

Base	*Unit*	*Type*	*Aircraft*
Sungei Patani	No. 21 Sqn RAAF	Buffalo	12
	No. 27 Sqn RAF	Blenheim I (night-fighter)	12
Kota Bharu	No. 1 Sqn RAAF	Hudson	12
	No. 36 Sqn RAF	Vildebeeste	6
	No. 243 Sqn RAF (Det)	Buffalo	2
	AHQ special reconnaissance aircraft	Beaufort	1
Gong Kedah	No. 100 Sqn RAF	Vildebeeste	6
Kuantan	No. 8 Sqn RAAF	Hudson	8
	No. 36 Sqn RAF	Vildebeeste	6
	No. 60 Sqn RAF	Blenheim I (bomber)	8[2]
Alor Star	No. 62 Sqn RAF	Blenheim I (bomber)	11
		Total first-line aircraft	164

Reserve Aircraft	
Blenheim I and IV	15
Buffalo	52[3]
Hudson	7
Vildebeeste	12
Catalina	2
Total Reserve	88

The main Japanese sea-going task force was composed of 19 transports with naval escort of one light cruiser and a destroyer flotilla. This force—preceded by two slower ships, which left a day earlier—steamed from a rendezvous at Samah on the south coast of Hainan Island, early on 4th December. The main force followed a course first southerly, then south-westerly, and then (as Brooke-Popham's staff correctly estimated) turned north-west into the Gulf of Siam. With low cloud giving them effective cover from detection by reconnaissance aircraft, they headed for a dispersal point to the north of Kota Bharu (approximately 100 miles south-west of Phuquok Island) where they were to rendezvous with a convoy of seven transports escorted by a light cruiser which had left Saigon on 5th December. From the point of rendezvous the convoys dispersed to their destinations, sixteen ships of the main convoy to the Singora-Patani area in Thailand and the remaining three to Kota Bharu in Malaya; and the seven ships of the Saigon convoy to the Kra Isthmus. The Kota Bharu force (presumably the ships sighted by Douglas and Lockwood on the night of 7th December) followed a southward course towards Kota Bharu and arrived at 10.30 p.m. The Singora and Patani detachments, still undetected, arrived a little earlier.

[2] In Malaya from Burma for bombing practice. About mid-December all officers and airmen returned to Burma by sea, their aircraft being retained in Malaya to replace wastage.

[3] Of these aircraft 21 were temporarily unserviceable owing to trouble with the valve gear on a new mark of engine.

The author of one Japanese record[4] wrote thus of the approach of the convoy, with touches of bombast typical of many Japanese military documents:

> In July 1941 the Imperial Army marched peacefully into French Indo-China. At that time our large force sailed through the South China Sea in a large convoy and landed in the southern part of French Indo-China. The scale of the large convoy that left X Base[5] five months later with the objective of landing on the Malay Peninsula was incomparably larger. . . . The escort of our warships in formation on both flanks kicking up surging waves, and our air planes circling above, with the Rising Sun glistening on their wings, presented a very spectacular panorama of the great overseas operation. . . . For the landing of our main force on the Malay Peninsula, our convoy momentarily entered the Gulf of Siam and, feigning a landing in the neighbourhood of Bangkok, suddenly changed its course and continued south. This is history.

At Kota Bharu the night of 7th-8th December was clear immediately overhead but for a distance of about 50 miles out over the South China Sea a heavy bank of clouds lowered almost down to sea-level. Earlier in the night Douglas and Lockwood, having piloted their aircraft back from their reconnaissance sorties, reported that they had been forced to fly at only 200 feet above the water for the last 50 miles; and now the cloud curtain had dropped to combine with the darkness, leaving the defenders no choice but to guess at what lay behind it, and wait.

[4] Captured in the Lae (New Guinea) area in September 1943, this document was written by Yokoyama Ryuichi, with a foreword by Col Yahagi Nakao, Chief of Army Information Section. It was dated 8th October 1942. The translation is ATIS Publication No. 278.

[5] Presumably Samah.

CHAPTER 10

JAPAN'S SEVEN-POINT ASSAULT

HALF an hour before the midnight of 7th-8th December Japanese troops occupied the Bund in Shanghai. From there, south to the equator, and from Thailand across the Pacific to Hawaii, Japan loosed her forces in a seven-point assault on British, American and Thai territory. In less than 14 hours Malaya, Hawaii, Thailand, the Philippines, Guam Island, Hong Kong and Wake Island had all been attacked and in that order.[1] The speculations of diplomats and military staffs about Japanese intentions were ended.

While the reasons for the scope and audacity of this assault are not matters for detailed consideration in this volume, one of the main factors in the military reasoning behind this decision for war on such a scale must be noted. The Japanese were keenly aware that there was no guarantee that the United States would stay out of the war. In American reactions to their foreign policy in the last two years there was, in fact, very strong evidence to suggest the contrary. Thus, if the initial attack was to be made against Malaya alone, as the Germans had been advocating in an anxious effort to avoid war with America, their forces would be left open to the risk of attack on the flank or the rear by the United States Pacific Fleet, the greatest single coordinated force that could interpose itself between them and their objective—conquest in the south. The decision, then, being for war in the plural, Japanese planners had to exploit the value of surprise. To achieve this surprise great reliance, obviously, must be placed upon air power. Japan's air strength—which had been the subject of so much speculation—was divided between her army and navy air forces. On this day on which she flung the challenge at combined British and American strength, Japan had an army air force with about 1,600 first-line aircraft and a navy air force with about 3,000 first-line aircraft.

Soon after midnight, in the operations room at Kota Bharu airfield, Wing Commander Davis, who was relieving Wing Commander Noble[2] as controller, answered a telephone call from the headquarters of the Indian brigade manning the coastal defences. He was told that three small vessels, each about 20 feet long, had been seen close inshore, moving slowly down the coast towards the mouth of a small stream which runs into the sea just north from Kota Bharu. Davis promptly informed Air Headquarters in Singapore and sought permission to take photographs with the help of flares. Soon after 12.30 a.m. and just as he had received authority for this reconnaissance, he heard the sound of gunfire coming

[1] All times are local times unless otherwise stated.

[2] Gp Capt C. H. Noble, OBE, 19062, RAF. Comd RAF Stn Kota Bharu 1941, Seletar 1941-42, Lahat 1942; Asst Comdt RAF Base Batavia 1942; comd RAF Stn Ender 1942-43. Oil company representative: of Melbourne; b. Bristol, Gloucester, Eng, 18 Apr 1905.

from the seafront. Almost simultaneously a second message from brigade headquarters reported that enemy warships were shelling the beach defences and that transports could be seen lying off shore apparently preparing to land troops. Immediately Davis called Singapore on the secret telephone and informed the Combined Operations Room. He then summoned Noble who at once granted his request for authority to call out the station and to return to his own squadron. Brigadier Key, commanding the Indian brigade, now sought air support for his forces in repelling an enemy landing, but Noble was still bound by the order forbidding offensive action even if a convoy was found, and therefore was not free to use his initiative though the fact of the attack and its purpose were now beyond question.

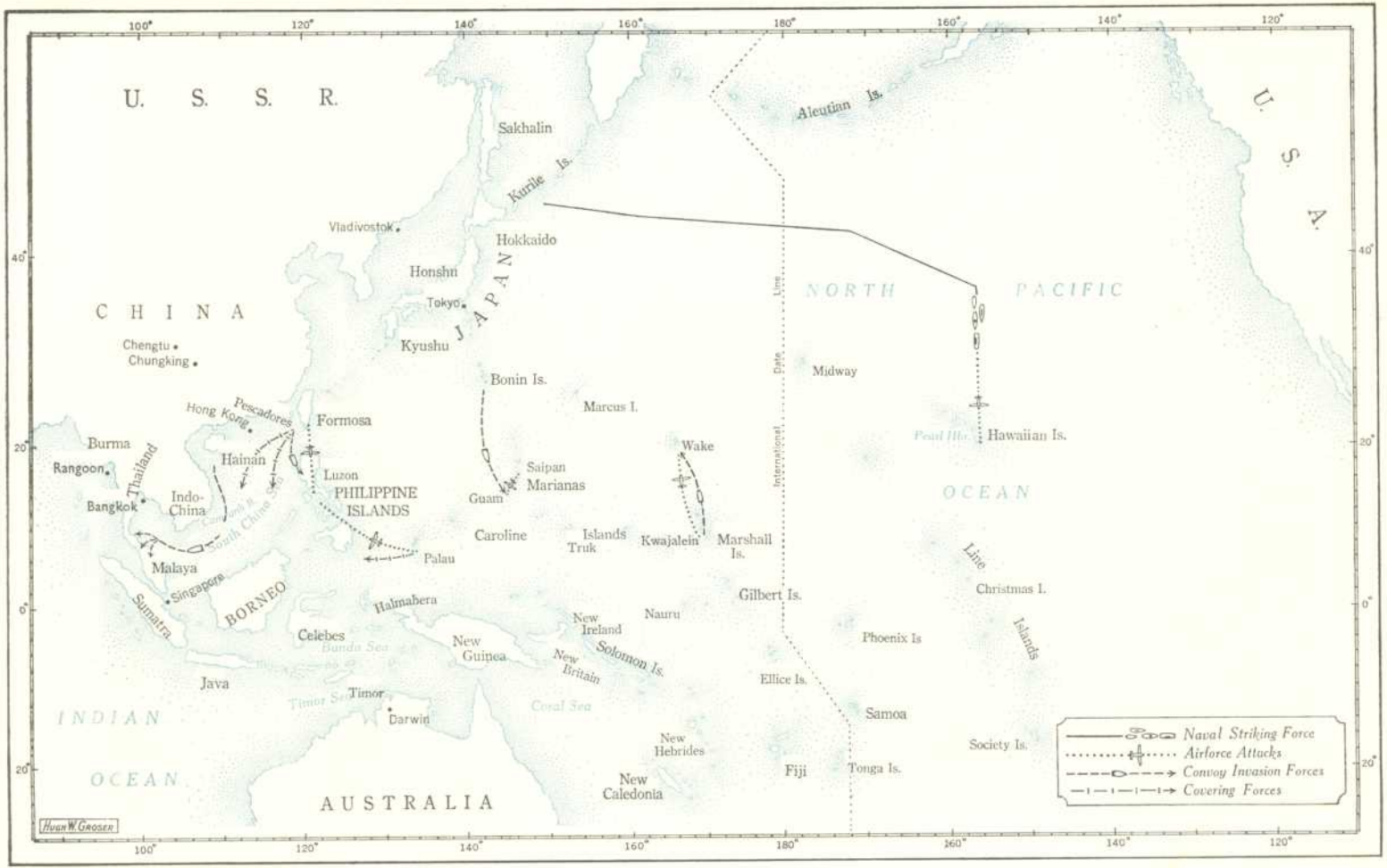
In Singapore Air Chief Marshal Brooke-Popham received the news in his office at the naval base. After a hurried conference with Air Vice-Marshal Pulford he ordered an immediate offensive against the Japanese ships with all No. 1 Squadron's available Hudsons.[3] It was thus that the R.A.A.F., and appropriately its No. 1 Squadron, received orders to strike the first blows against the Japanese from the air. Six aircraft were standing by, bombed-up and alert for operational orders. The remaining four serviceable Hudsons were hurriedly made ready. Meanwhile Air Headquarters had also ordered the Vildebeestes of No. 36 Squadron R.A.F. at Gong Kedah to be ready to launch a torpedo attack at first light and orders had been issued to No. 8 Squadron R.A.A.F. and No. 60 (Blenheim) Squadron R.A.F. at Kuantan, No. 27 (Night Fighter) Squadron at Sungei Patani, No. 34 (Blenheim) Squadron at Tengah and No. 62 (Blenheim) Squadron at Alor Star, to take off, also at first light, to attack enemy shipping in the Kota Bharu area. The six Vildebeeste torpedo bombers of No. 100 Squadron R.A.F. which had remained at Seletar were ordered to Kuantan to stand by for orders. Norgroup was informed that No. 27 Squadron would revert to the control of Air Headquarters, leaving only the Buffaloes of No. 21 Squadron to cooperate with III Indian Corps. The single Beaufort photographic-reconnaissance aircraft, now based at Kota Bharu, was ordered to make a sortie over the Lakon Roads, to the north of Singora, to determine whether or not the Japanese had landed in Thai territory.[4]

On the seafront at the junction of the Badang and Sabak beaches and only a mile and a half from the Kota Bharu airfield, enemy troops were now coming ashore in the face of determined fire from the 3/17th Dogras, the Indian battalion manning the pill-boxes fronting the beach, which had been mined and wired heavily in three belts.

At 8 minutes past 2 a.m., in clearing weather with a rising moon, the first Hudson took off followed at intervals of only two or three minutes by six more. Because of the nearness of the enemy ships to the coast

[3] Three of the squadron's 13 aircraft had long been unserviceable from lack of spare parts, ordered but not delivered.

[4] This had been forecast in the GHQ appreciation of 22nd November 1941. (This operational sortie was apparently the first by an Australian-made aircraft.)



Japan's initial assaults, 7th-8th December

and the low cloud base out to sea the pilots were ordered to make independent low-level attacks on any transports they could find and to report promptly what enemy forces they sighted. Each aircraft carried four 250-lb bombs fused for eleven seconds delay. The pilot of the first Hudson, Flight Lieutenant Lockwood,[5] on making his approach at 2,000 feet, sighted the three transports and dived to 50 feet to release two bombs. No hits were observed; as his attack drew heavy fire from the ships he took evasive action and again flew in and released his remaining two bombs. Flight Lieutenant Ramshaw, who followed Lockwood in to the attack, confirmed that Lockwood's second salvo had scored direct hits on the vessel amidships. From the first seven sorties, one Hudson, piloted by Flight Lieutenant Jones,[6] did not return. Several other aircraft returned holed by the anti-aircraft fire which was both heavy and accurate. Interrogations of the six crews who returned gave an estimate of the Japanese task force as 6 warships—probably 3 cruisers and 3 destroyers —3 transports, and a vessel described as "a large flat ship" which one crew thought might be a small aircraft carrier since no superstructure could be detected; it proved to be a landing-barge carrier. In ten more sorties the Hudson crews continued their bombing and machine-gunning attacks on the transports and on the barges which were moving to-and-fro between them and the shore. Flight Lieutenant Smith and his crew scored a direct hit with two bombs in the centre of a group of about ten barges close to the beach and saw a number of them overturn. From their second sortie Ramshaw and his crew, with which Flying Officer Dowie[7] still flew as observer, failed to return. About 3.30 a.m. a Hudson piloted by Flight Lieutenant O'Brien,[8] made a reconnaissance flight about 30 miles to seaward from Kota Bharu and sighted a cruiser and three destroyers steaming at high speed in a north-westerly direction. O'Brien then returned towards Kota Bharu to attack the transports.

Seeing a ship underneath me about 10 miles from the coast I decided to attack (he wrote afterwards). It was a nice moonlight night and going out wide I came in at sea level for a mast-height attack. When within half a mile of this ship it put up such a concentrated ack-ack barrage that I realised it was a cruiser and veered off around its bows taking violent avoiding action while my rear gunner machine-gunned the decks as we passed. Realising the mistake I had made in attempting to attack a cruiser from low level, I returned towards the merchant ship near the beach and carried out a mast-height attack on a large merchant vessel which was stationed about four miles from the beach apparently unloading troops, as it was surrounded by barges. I encountered considerable light ack-ack fire during my bombing run, but took violent avoiding action and dropped my stick of four 250-

[5] Lockwood had F-O A. B. Jay as observer and Sgts A. W. Munday and R. M. Thomson as gunners.

[6] F-Lt J. G. Jones, 570. 21 and 1 Sqns. Regular air force offr; of Essendon, Vic; b. Essendon, 15 Jun 1919. Killed in action 8 Dec 1941. The other members of the crew were F-O R. H. Siggins, and Sgts G. J. Hedges and D. Walters.

[7] F-Lt D. A. Dowie, 649; 1 Sqn. Regular airman; of Adelaide; b. Adelaide, 24 Sep 1917. (Dowie was the sole survivor of Ramshaw's crew, having been rescued from the water by the Japanese.) The gunners in Ramshaw's aircraft on this sortie were Sgts G. S. White and J. C. Coldrey.

[8] W Cdr J. T. O'Brien, AFC, 467. 1 Sqn, 1 OTU (RAAF Special Transport Flight), 65 Sqn USAAF and Trans Pacific Air Ferry Service; CFI 7 OTU 1944-45. Regular airman; of Junee, NSW; b. Cootamundra, NSW, 8 Mar 1918.

pounders across its bows, getting a direct hit. It is possible that my other bombs did considerable damage to the barges which were clustered round the sides of the vessel, but it was too dark to say definitely. There was considerable barge activity from the merchant vessel to the beach, and there was no scarcity of targets, which we machine-gunned as opportunity offered while returning to the aerodrome.[9]

Flight Lieutenant Diamond[1] and his crew in their second run over one transport scored a direct hit just forward of its bridge. The gunners then swept the vessel's decks with their fire and as the aircraft turned away the ship could be seen burning from the bomb burst. Most of the heavy anti-aircraft fire came from a cruiser lying about half a mile to seaward of the transports. Diamond's aircraft was severely damaged on this sortie and returned to base with one engine out of service and holes in the wings, fuselage and tail plane. Another Hudson piloted by Flight Lieutenant Douglas was also severely damaged by anti-aircraft fire but got back to the base. In the second last sortie of the series Smith made a shallow spiral dive, levelled out at between 100 and 200 feet and dropped his four bombs as a "stick" on the centre of the three transports.[2] The ship was seen to lift out of the water with the impact of the explosion. The port-side gunner in the aircraft, Sergeant Hart,[3] was wounded by shrapnel in the left arm and leg. About 4.30 a.m. those on the airfield at Kota Bharu heard a particularly loud explosion out to sea—a blast too heavy even for a broadside from a cruiser. When, at 5 a.m., Davis ordered a break in the attack so that his Hudsons might refuel, rearm and be checked for serviceability, further interrogation of the aircrews indicated that one of the enemy ships had blown up and sunk and that at least 24 barges had been either destroyed or overturned. Several crews reported that enemy warships had signalled to them giving the correct letter of the day—the recognition signal arranged between the Royal Navy and the R.A.F. and R.A.A.F. as a secret signal for the security of naval vessels against attack by friendly aircraft. This, and the detection of lights on the shore believed to have been flashed as a guide to the landing point for the enemy convoy, suggested that Japanese agents had been at work effectively before the attack.[4]

About 6 a.m. O'Brien brought his aircraft back from another reconnaissance flight. He reported that one large transport was burning about three miles off shore, and that about 30 miles north-north-east from Kota Bharu two cruisers, four destroyers and two merchant ships, including the vessel later known to have been a landing-craft carrier, and a small escort

[9] The Hudsons at this stage mounted two fixed Browning .303-inch guns in the nose, two in a rear power turret and two side guns. The side guns were unorthodox; a field modification in which they were mounted inside the aircraft, the muzzles protruding through an opening cut in the perspex of a window to give a useful though restricted field of fire.

[1] F-Lt O. N. Diamond, DFC, 270544; 1 Sqn. Dry cleaner; of Brisbane; b. Brisbane, 27 Oct 1916.

[2] A "stick"—bombs dropped in line with specified and equal intervals between each.

[3] W-O R. R. Hart, 402289. 1 Sqn; 11 and 45 OBU's. Storeman; of Sydney; b. Balmain, NSW, 9 Sep 1918.

[4] Events proved this to be largely a psychological reaction. Though unquestionably there were enemy agents in Malaya, records examined since the war show that the Japanese fighting Services were poorly supplied with Intelligence information, at least at the beginning of the Malayan campaign.

vessel, were moving at high speed on the same course as those he had sighted on his earlier reconnaissance. This was taken as clear evidence that the enemy's sea force was now retiring. Nine Japanese bombers were sighted over this formation—the first enemy aircraft reported since the combat began. On returning to Kota Bharu the Hudson crew sighted a large number of small power-driven boats off shore and attacked them with machine-gun fire sinking about six.

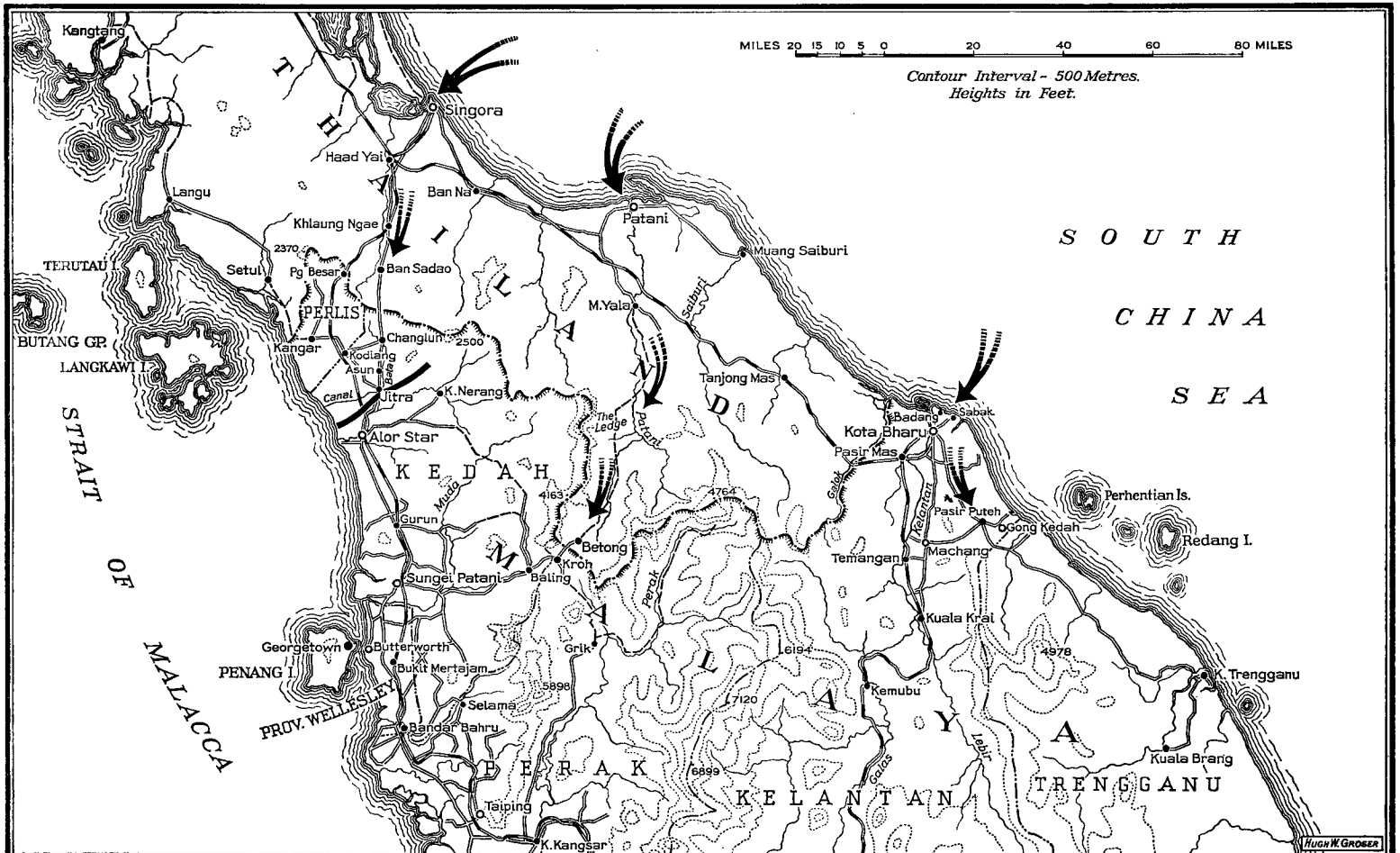
By this time the enemy had succeeded in capturing two of the strong-points in the Dogras' defences and brigade headquarters was calling for further air support for attacks on small pockets of enemy troops who had begun to penetrate inland. A report was received that enemy barges were being towed up the Kelantan River, the main stream in the area, on which Kota Bharu village was situated, and the two R.A.F. Buffalo fighters then based on Kota Bharu went out to attack them. One of these aircraft was damaged by fire from the ground. At 7.10 a.m. Lockwood made a reconnaissance out to sea to find that all the enemy ships had now retired except the transport which was on fire. A large patch of oil on the sea near the burning ship suggested (wrongly) that a second ship had sunk. Many light craft were closer inshore and concentrations of Japanese troops with horses were seen near the mouth of the Peng Chepa River, another of the network of waterways draining into the sea near Kota Bharu. This aircraft in company with another piloted by Smith, bombed and machine-gunned these troops, killing many. Sergeant Munday,[5] one of Lockwood's gunners, fought with particular determination and efficiency, even when enemy fire from the beach penetrated the fuselage alongside his gun.

Earlier, in heavy rain, Vildebeestes from Kota Bharu and Kuantan had gone out to make torpedo attacks on the enemy ships reported by O'Brien. Their principal target was a cruiser which engaged in skilful evasion tactics and escaped; the aged torpedo-bombers returned to their bases without scoring any known hits. No. 1 Squadron crews, about this time, saw aircraft flown by their fellow Australians of No. 8 Squadron coming in to the attack.

At dawn Squadron Leader Henderson, as acting commander of No. 8 Squadron at Kuantan, had led off three flights of Hudsons[6] which with eight Blenheims of No. 60 Squadron took off in heavy fog and flew direct to the scene of the Japanese landing. Approaching at 500 feet Henderson's flight found only the one merchant ship and it on fire, but sighted many small power-driven boats and several armoured patrol boats. One of these Hudsons made a bombing attack on the single enemy ship but, since it was now virtually derelict, the bombs were wasted. The small boats were then attacked by the flight with bombs and gunfire. Another of No. 8 Squadron's flights—the only one to do so—intercepted a broadcast message from the Kota Bharu operations room to divert all

[5] Sgt A. W. Munday, 8225; 1 Sqn. Electroplater; of Melbourne; b. 20 Sep 1920. Killed in action 14 Feb 1942.

[6] The flight which had remained behind at Sembawang when the squadron moved to Kuantan had by now rejoined it.



Japan's opening moves on Malaya

available aircraft to the much-more-important target—the enemy's main sea-going force now steaming away from the coast. A heavy rain storm prevented the pilots from finding the ships and the Hudsons returned to continue the attack on small boats still afloat close to the shore. One pilot, Flight Lieutenant Spurgeon,[7] made another bombing run over the burning transport and in doing so his aircraft was so severely damaged, either by an explosion in the ship or by the blast from the aircraft's own bombs, that he was forced to make a crash landing at Kota Bharu. The leader of another of No. 8 Squadron's flights, Flight Lieutenant Bell,[8] estimated that there were between 50 and 60 small Japanese boats in the vicinity of the burning ship; armoured power-driven boats were slightly in the majority, each with a machine-gun mounted in a turret just forward of amidships, and barges in which the troops were not at first visible because they were taking cover under the boats' gunwales. Bell and his crew attacked two of the power-driven boats with gunfire but, when their Hudson was damaged by fire from one of them, they too were forced to return to Kota Bharu and make a crash landing. Another Hudson, piloted by Flying Officer Stumm,[1] attacked several barges that were in tow and bombed and wrecked the towing craft.

The first report of enemy fighter opposition came from a No. 8 Squadron Hudson piloted by Flight Lieutenant Hitchcock,[2] one of whose gunners fired an accurate burst into the attacker; the Hudson crew saw it crash into the sea. Three of the Hudsons that returned to Kuantan had been seriously damaged by anti-aircraft fire, but casualties were light—two observers with minor wounds. The Blenheims of No. 60 Squadron found little in the way of targets left for them and either failed to receive the order to pursue the enemy ships or failed to find them in the heavy rain storms that swept the sea at that time. On return to Kuantan this squadron was ordered to Singapore. The crews of No. 27 Squadron and No. 34 Squadron, who had had similar ill-luck with targets, landed respectively at Sungei Patani and Butterworth.

A report that barges carrying enemy troops had been sighted off the coast near Kuantan—one of a series of such reports that was to add to the tension of the defending forces and waste precious flying hours—had been investigated that afternoon by a Hudson of No. 8 Squadron piloted by Flight Lieutenant Arnold.[3] He found only a small fishing fleet returning to port.

Meanwhile, No. 1 Squadron Hudsons were still making sorties from Kota Bharu. Almost the entire strength of the unit had been concentrated

[7] W Cdr C. H. Spurgeon, DFC, 569. 21, 2 and 8 Sqns. Shipping clerk; of Melbourne; b. Hawthorn, Vic, 18 Apr 1920.

[8] W Cdr R. E. Bell, MVO, DFC, AFC, 268. 8 and 100 Sqns; comd 22 Sqn 1942, 24 Sqn 1945. Regular air force offr; of Darling Point, NSW; b. 10 Feb 1917.

[1] F-Lt D. C. Stumm, 270681. 6, 8 and 100 Sqns. Shipping clerk; of Brisbane; b. Sydney, 11 Dec 1919. Killed in action 4 Oct 1942.

[2] Sqn Ldr G. J. Hitchcock, 555. 8 and 6 Sqns; Instructor 1 OTU 1943-44; comd 67 Sqn 1945. Regular air force offr; of Ashfield, NSW; b. Kandy, Ceylon, 26 Oct 1919.

[3] F-Lt R. G. Arnold, 475. 23 and 8 Sqns. Regular air force offr; of Bruce Rock, WA; b. Lameroo, SA, 21 Jan 1919. Killed in action 18 Jan 1942.

on the enemy's landing operations though there was a variation when one aircraft, piloted by Diamond, bombed the approaches to a railway bridge over the river, north of Pasir Mas on the Thai frontier, and damaged the railway line. About 9 a.m. Flight Lieutenant Emerton reported that the remaining enemy transport, still burning, appeared to have been abandoned. A tug with four barges in tow was seen moving up the Kelantan River but a Japanese Navy Zero fighter intercepted the Hudson before it could attack the boats. By making steep turns towards the diving fighter Emerton evaded its fire. The Japanese pilot then turned his attention to another Hudson so Emerton followed in and fired on him with his front guns forcing him to break off the attack. Emerton's observer, Flying Officer Thomson,[4] was wounded and one of the Hudson's fuel tanks had been holed, so he returned to Kota Bharu.

In the operations room at Kota Bharu, Noble and Davis now took stock: to them it appeared that two transports had been sunk and one damaged by direct bomb hits.[5] Many barges had been destroyed or damaged and the enemy had left the beaches and the shallow water littered with their dead and wounded and with the wreckage of their landing craft —a severe though not deterring loss. The photographic-reconnaissance Beaufort had by this time returned from the Lakon Roads. Though the aircraft had been so badly damaged by gunfire from enemy fighters that it had to be destroyed after landing, the crew were unharmed and the pilot was able to describe a large concentration of Japanese ships landing troops on the Singora-Patani seafront. The photographs taken from the Beaufort were flown back to Singapore by one of the R.A.F. Buffaloes. These not only confirmed the presence of the main enemy convoy off Singora, but revealed a force of about 60 Japanese aircraft, mainly fighters, on Singora airfield.

It was at this stage that the Japanese Air Force made its first major assault on a Malayan land target—Kota Bharu airfield. Soon after 9 a.m. Navy Zeros and Army Type-97 fighters arrived in formations of from five to nine aircraft each, and, "peeling off" at between 5,000 and 7,000 feet, dived recklessly to fire their guns from almost tree-top level. The enemy pilots left the defenders of the airfield in no doubt of their skill in handling their aircraft. The first attacks were against the anti-aircraft posts, but later they concentrated on men and aircraft on the ground. From then on, at intervals throughout the day, these raids continued and though the casualties were few they greatly hampered the work of the maintenance crews and the aircrews landing and taking off. In spite of this the surviving Hudsons continued their sorties. Shortly before midday brigade headquarters reported that three enemy transports were disembarking troops at the mouth of the Kelantan River. Four Hudsons and three

[4] Sqn Ldr N. R. S. Thomson, 250670. 1, 100 and 37 Sqns. Storeman; of Yarraville, Vic; b. Bendigo, Vic, 20 Sep 1914.

[5] In fact only one transport, the *Awagisan Maru* (9,794 tons), had been sunk. This was the first Japanese merchant ship sunk in the war against Japan. *Sakura Maru* and *Ayato Maru*, which with *Awagisan Maru* made up the full transport strength of the force which invaded Kota Bharu, were damaged. *Awagisan Maru* suffered 10 direct bomb hits.

Vildebeestes were sent out to attack. Several armoured patrol boats were seen and attacked but there was no sign of any fresh enemy landing. Two of the Hudsons were damaged by fire from the enemy boats. Later it was learned that the call for an air attack had been prompted by wrong information.

The situation on the ground had now become confused but it was clear to the defenders that though the enemy's landing operations had been very costly to them they had, in fact, succeeded. Brigadier Key's Indian troops, though fighting gallantly, were unable to contain the considerable Japanese force that had succeeded in crossing the beaches and penetrating into the maze of creeks, lagoons and swampy islands.

About midday, while the Hudsons were still taking off to attack enemy landing craft, those on the airfield became aware of enemy small arms fire coming, they suspected, from a "pocket" of snipers believed to have penetrated to a point close to the airfield perimeter and making movement in the barracks and dispersal areas dangerous. By 4 p.m. this fire had increased and it was reported that enemy ground troops had reached a point within 200 yards of the radio transmitting station. An hour later, in the eighth and final enemy air attack of the day, two Hudsons were severely damaged on the ground. Aircrews and ground staff had now been toiling and fighting without break for more than 14 hours. From a water-logged single runway aircraft had been taking off and landing almost continuously. Except when, once or twice, men could not be located quickly in the darkness, the night operations had gone on without a hitch, the captains of the Hudsons flying with their permanent crews throughout the battle. The coming of daylight brought little relief, for the enemy air attacks had quickly written off that advantage. The loss of two complete crews that night had been a severe blow. The Kelantan customs launch put to sea to search in vain for survivors. A report that a yellow dinghy containing three men had been sighted about three miles out to sea was received hopefully, and a tin packed with rations and sealed was taken by a Vildebeeste pilot, who was flying to a southern airfield, in the hope that he might be able to find the men in the dinghy and drop the rations to them. Apparently this mission was unsuccessful. A second report stated that one airman had been sighted drifting in a native boat, but there was no verification.

After the first shock of being awakened by naval gunfire the ground staff had worked splendidly. In the bomb-fusing area Warrant Officer Draper[6] worked without rest to ensure that the Hudsons were bombed-up quickly and correctly after each sortie in the fastest possible time. Leading the maintenance crews, Flight Sergeant Musicka[7] and Sergeant White[8] matched Draper's example in the ingenuity and determination with which they stripped parts from seriously-damaged aircraft so that they could

[6] W-O D. L. Draper, 2996; 1 Sqn. Regular airman; of Thornbury, Vic; b. 9 Apr 1911.

[7] W-O H. W. Musicka, 2041; 1 Sqn. Regular airmen; of Williamstown, Vic; b. Paddington, NSW, 13 Jan 1914.

[8] F-Sgt J. V. White, 205690. 21 and 1 Sqns. Mechanic; of Hawthorn, Vic; b. Hobart, 9 Aug 1916.

get other Hudsons airborne again. But such was the strain of battle that the squadron now had only five airworthy aircraft. Though two others required only one wheel each to make them serviceable, they were in an exposed position and repeated attempts to replace the damaged wheels were prevented by enemy fighter attacks and by Japanese ground fire.

There was now considerable confusion at station headquarters where, in the temporary absence of Wing Commander Noble from the operations room, an order was received from Air Headquarters in Singapore that all serviceable aircraft were to be flown to Kuantan and that, after demolitions, the airfield was to be evacuated. This order was given in response to a report from Kota Bharu (sent apparently without the station commander's knowledge) that the airfield was being attacked. Noble returned to find the operations room and other station buildings blazing—the order from Singapore had been obeyed without his authority and all too precipitately. At his own headquarters some distance away Brigadier Key also received the report that the airfield was under attack. He immediately went to investigate and, with Noble, went forward to the perimeter where he questioned some of the Indian troops and was told that there was no sign of the enemy. In all the circumstances Noble saw no choice but to proceed with the evacuation, a course in which Key assented.[9]

When Davis first heard of the evacuation order he questioned the authority for it but, as a precaution, instructed his aircrews and ground staff to prepare for a special movement, the order for which had been planned in detail some months earlier for use in emergency. The crew of each aircraft received boxes of consumable stores and spares sufficient for independent operations for from four to six weeks, and then stood by for further orders. Meanwhile Davis was leading a party round the airfield to destroy aircraft that could not be flown off. They demolished two of their own Hudsons and one from No. 8 Squadron which had made a crash landing earlier in the day. Davis then heard a report that the last Hudson to take off was to destroy the airfield facilities by bombing. Still lacking definite authority he deferred action on this. It was now considered unwise for members of the squadron to risk crossing to the barracks area to gather personal kit, but by now 700 pounds of equipment had been loaded into each of the five remaining serviceable Hudsons. Immediately Davis had confirmed the evacuation order he instructed his crews to take off for Kuantan. Flight Lieutenant Douglas undertook the risky task of taking off an aircraft so damaged that the wing flaps would not remain

[9] Army and air force reports on what happened at Kota Bharu on this day are in conflict. Brig (later Maj-Gen) Key has since recorded his disbelief in the reports that the airfield was under deliberate enemy ground fire that afternoon, his explanation being the "possibility" that stray bullets were passing over it from the Japanese fighting near the beach or adjacent islands. No. 1 Squadron's detailed report of events—since checked by W Cdr (later Gp Capt) Davis—records that there was considerable enemy ground fire which interfered seriously with movement on the airfield. Davis was on the airfield practically throughout the day and the air force version on this point is accepted here without further question. On the other hand a comparable testing of evidence upholds an assertion by Key that there was no direct enemy attack on the airfield up to the time of the air force evacuation—"To the best of my knowledge the aerodrome was not penetrated by the Japanese until approximately midnight," he has stated. This explains the army view that while Air Headquarters' decision to order the evacuation of the airfield was undoubtedly justified by the general air situation, it was not justified by the ground situation at Kota Bharu that day.

in the "up" position and the undercarriage would not retract. He tied the flaps into position with wire and then, gathering nine airmen as he taxied down the runway, he took off and flew, with wheels down, all the way to Kuantan where he made a safe landing at nightfall. Flight Lieutenant O'Brien, in a damaged Hudson with 17 passengers aboard, was fired on by Japanese machine-gunners and riflemen as soon as his aircraft cleared the treetops and his rear gunner returned the fire. He evaded six Zeros about 30 miles south of Kota Bharu by flying about 10 feet above the beach beside high coconut palms. Seven airworthy Vildebeestes also took off and flew to Kuantan which, though a long way to the south, was the nearest east coast airfield that offered reasonable safety for air operations; Gong Kedah and Machang, the alternatives, were practically undefended and very vulnerable.

As the station was still occupied by ground units the order that the last Hudson to take off should bomb the airfield (an order which had, in fact, been issued from Air Headquarters) was out of the question. Davis, having watched his Hudsons take off, then set to work to supervise the evacuation of the remaining members of the squadron in trucks that Noble had procured locally. Led by Noble himself, who had brought the situation on the station under control, the remaining air force strength then drove through Kota Bharu village and on, 50 miles, to Kuala Krai, the nearest railway station in operation, where all entrained for Singapore.

Brigadier Key's immediate problem was that now one of the airfields it had been his task to protect had been evacuated by the air force. If he continued to fight in the swamps round it, the enemy might land a force on the coast farther south and drive in to cut his communications. In the beach area the position was confused and accurate information difficult to obtain. Reports of smoke seen to the seaward of the Perhentian Islands farther south, might indicate another enemy landing such as he feared and he no longer had aircraft either for reconnaissance or for a strike against such operations. It was a heavy responsibility. In pouring rain he withdrew his forces to cover Kota Bharu village itself, having first ordered his artillery to destroy the petrol stores on the airfield.[1] During the night there were recurrent reports that the enemy had landed additional troops on the coast below Kota Bharu. Recognising the seriousness of this threat and that the airfields at Gong Kedah and Machang were no longer of any use to the R.A.F., Brigadier Key ordered the destruction of buildings and petrol stores at each airfield and then withdrew his brigade to Machang.

While the battle at Kota Bharu was at its height Singapore learned at first hand that war had come. At 4.30 a.m. it was called on to endure its first air raid. The approach of Japanese bombers was detected by radar more than half an hour before the attack. Fighter Control opera-

[1] The runway was still quite serviceable because preparations for mining it had not been completed and, though the station buildings had been burned, bombs, torpedoes and petrol had been left intact when the air force units moved out.

tions room acted promptly but the headquarters of the civil air raid precautions organisation had not been manned and thus the civil population received no effective warning. Except for the establishments of the three fighting Services, which had all received the warning, there was no blackout when the bombers came over the city.[2] A force estimated at 17 aircraft made the attack, one formation of about 9 flying over at 12,000 feet without bombing—at least initially—apparently to draw the searchlights and anti-aircraft fire from the rest of the force which came over to bomb at 5,000 feet. For the most part the bombs fell on Seletar where little or no damage was done, and on Tengah where three Blenheim bombers of No. 34 Squadron were damaged and craters made in the airfield. Some of the bombs, however, did fall in the centre of the city causing about 200 casualties, mostly among the Asian population.

On this first day of war against Japan Brooke-Popham released his Order of the Day, the issue of which, he has since explained, was decided as early as May 1941 and the main object of which was to appeal to the Indian troops in his command. Signed by himself as Commander-in-Chief Far East and by Vice-Admiral Sir Geoffrey Layton as Commander-in-Chief, China, it read:

> Japan's action today gives the signal for the Empire naval, army and air forces and those of their Allies, to go into action with a common aim and common ideals. We are ready. We have had plenty of warning and our preparations are made and tested. We do not forget at this moment the years of patience and forbearance in which we have borne, with dignity and discipline, the petty insults and insolences inflicted on us by the Japanese in the Far East. We know that these things were only done because Japan thought she could take advantage of our supposed weakness. Now, when Japan herself has decided to put the matter to a sterner test, she will find that she has made a grievous mistake. We are confident. Our defences are strong and our weapons efficient. Whatever our race and whether we are now in our native land or have come thousands of miles, we have one aim and one only. It is to defend these shores, to destroy such of our enemies as may set foot on our soil, and then, finally, to cripple the power of the enemy to endanger our ideals, our possessions and our peace. What of the enemy? We see before us a Japan drained for years by the exhausting claims of her wanton onslaught on China. We see a Japan whose trade and industry have been so dislocated by these years of reckless adventure that, in a mood of desperation, her Government has flung her into war under the delusion that, by stabbing a friendly nation in the back, she can gain her end. Let her look at Italy and what has happened since that nation tried a similar base action. Let us all remember that we here in the Far East form part of the great campaign for the preservation in the world of truth, and justice and freedom; confidence, resolution, enterprise and devotion to the cause must and will inspire every one of us in the fighting services, while from the civil population, Malay, Chinese, Indian or Burmese, we expect that patience, endurance and serenity which is the great virtue of the East and which will go far to assist the fighting men to gain final and complete victory.

Late on 8th December, the news coming in to Combined Operations Room in Singapore from northern Malaya was in grim contrast to the tone of the Commander-in-Chief's order. It was true that by dusk on

[2] Brooke-Popham in his despatch expresses the opinion that the absence of a blackout made little if any difference as the weather was clear and the moon full so that the coastline and the city itself must have shown up very clearly.

that first day the Japanese invasion forces had suffered casualties.[3] But the important fact was that they had now secured a firm grip on the coastal belt in the region of Kota Bharu and were still more firmly established at the northern land gateway to Malaya which had been achieved practically without cost and with possession of air bases at Singora and Patani from which they were attacking almost every British airfield in the north of the peninsula.[4]

In their assault on the northern airfields the Japanese were leaving no doubt that their first purpose was the reduction of the defenders' air power and this with the least possible damage to the airfields themselves which they coveted for their own use. To the east, in addition to Kota Bharu, the airfields at Gong Kedah and Machang, soon to be abandoned, were under air attack. In the north-west the cost to R.A.F. Command was severe, Sungei Patani and Alor Star particularly being heavily and repeatedly raided. The enemy used only light bombs (150-lb) since the destruction of men and aircraft was their main objective. Their attacks so frequently synchronised with the landing or preparation for take-off of the British aircraft that it led to further speculations that the enemy was well served by an efficient spy service. What the suddenness of these air attacks did prove was the inadequacy of the warning system. When the Japanese struck there were only four radar stations in operation and none of them in northern Malaya; a station had been built at Kota Bharu but the radar equipment had not been installed.

Late on 8th December Brooke-Popham sent a telegram to the British Chiefs of Staff warning them that it was unlikely that the R.A.F. air effort could be maintained as it then was for more than two or three weeks, and asking that air reinforcements should be sent urgently, particularly two squadrons of long-range bombers and two squadrons of night fighters.

At Sungei Patani No. 21 Squadron, having learned of the Japanese attack on Kota Bharu and of the bombing of Singapore, was preparing its Buffalo fighters for action when, at 7 a.m. on 8th December, the station operations room reported enemy aircraft approaching from the west. The station commander, Squadron Leader Fowle,[6] called for two Buffaloes to stand by and await instructions. The squadron commander, Squadron Leader Allshorn, detailed Flight Lieutenant Williams[7] and Flying Officer Sproule[8] for this duty and sent another section—Flight Lieutenant Kirk-

[3] These losses were assessed by RAF Command at "about 5,000" and by the army at 15,000. After the war the Japanese stated their losses round Kota Bharu to have been 320 killed and 528 wounded.

[4] Though grass had been allowed to grow on the Patani airfield right up to the "last minute", reports received, "unfortunately just too late", showed that it was ready for Japanese aircraft with drums of fuel hidden under the trees the day before the invasion took place. Percival, *The War in Malaya,* pp. 113-14.

[6] W Cdr F. R. C. Fowle, DFC, 37526, RAF. Comd RAF Stn Sungei Patani 1941, 27 Sqn 1941-42; Coastal Defence Wing, India, 1942; comd 102 Sqn 1943, RAF Stn Carnaby 1944; civil affrs duties ACSEA 1945. Regular air force offr; of Walton-on-Thames, Surrey, Eng; b. Sholapur, India, 30 Jan 1912.

[7] Sqn Ldr F. H. Williams, 479. 21, 21/453 Sqns; comd 21 Sqn 1941-42, 1 and 102 FSHQ; 25 Sqn 1942-43; Controller 109 FSHQ 1943-44; comd 111 FSHQ 1944-45. Regular air force offr; of Subiaco, WA; b. Perth, WA, 8 Mar 1917.

[8] Sqn Ldr D. M. Sproule, DFC, 250641. 21, 77, 25 Sqns; comd 77 Sqn 1943. Articled clerk; of Sandy Bay, Tas; b. Hobart, 3 Oct 1917. Killed while prisoner of war, 16 Aug 1943.

man[9] and Flying Officer Hooper[1]—to the stand-by hut while the engines of their aircraft were warmed up. Allshorn wished to "scramble" the squadron but Fowle would not agree. In the crew room the telephone call announcing the approach of enemy aircraft caused the general clatter and chatter to subside so dramatically that one pilot, Flying Officer Hood,[2] wrote later with pardonable exaggeration: "You could have heard the beat of a butterfly's wings." Ten minutes later five Type-97 Japanese bombers appeared flying at 11,000 feet. Allshorn and the waiting pilots in the crew room ran towards their aircraft, putting on their parachutes and preparing to "scramble" and intercept. As they did so bombs began to explode on the opposite side of the airfield among No. 27 Squadron's aircraft. Williams and Sproule had been specifically ordered from the operations room not to take off but to continue to stand by and await instructions. Kirkman and Hooper, without waiting for orders, now took off, and seconds later bombs began bursting among the Buffaloes on the ground. The remainder of the squadron's pilots and ground staff took cover in a concrete drain which surrounded the airfield while two of their aircraft were completely destroyed, two were damaged by fire started by the bombing, and three others were damaged by bomb fragments—seven aircraft made unserviceable in a matter of minutes. Another stick of bombs fell directly across station headquarters killing two of the R.A.F. operators and destroying the station communications. There were no other Service casualties but the bombs killed about 16 Chinese women who were on the airfield in a working party. The two Buffalo pilots who had taken off climbed and endeavoured to close with the enemy bombers but they lacked sufficient altitude and the guns in neither aircraft would operate.[3] They were obliged to circle and land again without combat.

Two hours later Hooper, on a perimeter warning patrol, sighted seven Japanese Type-97 bombers 2,000 feet above him. There was no reply to his radio-telephone call for instructions so he climbed again to attack.[4] As he did so six Navy Zero-type fighters dived on him. Turning his Buffalo on to its back, Hooper put his own aircraft into a dive and evaded the enemy who then broke away. The bombers did not attack and Hooper returned and landed safely. When two more Buffaloes had been made serviceable, Flight Lieutenant Kinninmont[5] and Sergeant Chapman[6] took

[9] Sqn Ldr R. A. Kirkman, 474. 21, 25 and 77 Sqns; Controller 1 Fighter Wing HQ 1942-43; comd 110 MFS and Controller 105 FCU 1944. Regular air force offr; of Kellerberrin, WA; b. Kalamunda, WA, 27 Sep 1920.

[1] Sqn Ldr J. B. Hooper, 270547. 21, 23 Sqns, 1 PRU; comd 12 and 21 Sqns 1943, 25 Sqn 1944-45. Importer; of Brisbane; b. Brisbane, 6 Jan 1916.

[2] F-Lt B. Hood, 250723. 21, 77 and 86 Sqns. Engineer; of Sandy Bay, Tas; b. Hobart, 25 Aug 1913.

[3] Maltby, in his despatch, acknowledges that the guns in the Buffaloes "had given trouble and were all unserviceable from lack of solenoids".

[4] There was no VHF radio equipment in Malaya and effective control of fighter aircraft was thus limited even in the best conditions to about ten miles. But atmospheric interference when thunder storms occurred seriously restricted even this short range.

[5] W Cdr J. R. Kinninmont, DSO, DFC, 584. 21, 21/453, 86, 76 and 77 Sqns; comd 75 Sqn 1943-44; Wing Leader 78 Wing 1945. Regular air force offr; of Northbridge, NSW; b. North Sydney, 13 Nov 1920.

[6] Sgt N. R. Chapman, 401102. 4, 21 and 21/453 Sqns. Clerk; of St Kilda, Vic; b. Melbourne, 15 Nov 1915. Killed in action 18 Jan 1942.

off to make a reconnaissance over Singora. About two miles from their objective they were attacked by 12 Japanese Navy Type-96 fighters. Kinninmont, recording his first experience of combat, wrote later:

> Then the sky seemed full of red circles (the red rondels on their aircraft) and the Japs all tried to shoot us down at once. I pulled up to meet one as he dived down. . . . I was in such a hurry to shoot something that I didn't use my gun sight. I simply sprayed bullets in his general direction. Somebody was on my tail and tracers were whipping past my wings. . . . Chapman was turning and shooting with four Japs. I decided to get out. I yelled to Chapman (over the radio telephone) 'Return to base. Return to base.' and went into a vertical dive. As I went down I glimpsed the sergeant diving straight for the ground with three Japs on his tail, shooting; then I lost sight of him. At three thousand feet I had a quick shot at a four-engined Kawanisi Jap flying-boat and missed. . . . Of the three Japs that followed me down in that dive one stuck and he stuck like a leech. . . . As I watched him, my neck screwed around, I saw his guns smoke and whipped into a tight turn to the left. It was too late and a burst of bullets splattered into the Buffalo. . . . I opened the throttle and the motor took it without a murmur. It was then that I felt the first real fear in my life. . . . It struck me in a flash. This Jap was out to kill me. I broke into a cold sweat and it ran down into my eyes. A noise throbbed in my head and I suddenly felt loose and weak. My feet kept jumping on the pedals. My mouth was stone dry and I couldn't swallow. My mouth was open and I was panting as though I'd just finished a hundred yard dash and I felt cold. Then I was jibbering. . . . 'Watch those trees. ——, that was close. He'll get you next burst. You'll flame into the trees. No, he can't get you. ——, he mustn't get you. You're too smart. He'll get you next time. Watch him, watch his guns. Watch those trees. ——, it's cold.' My feet were still jumping on the pedals. I couldn't control them. Then I saw his attacks were missing me. I was watching his guns. Each time they smoked I slammed into a tight turn. And then my whole body tightened and I could think. I flew low and straight, only turning in when he attacked. The Jap couldn't hit me again. We raced down a valley to the Thai border and the Jap quit. . . .[7]

Both Kinninmont and Chapman returned safely to Sungei Patani. About 10.45 a.m., when five Buffaloes were standing by, a formation of 15 enemy bombers was seen approaching from the north at about 6,000 feet. A dump containing about 200,000 gallons of 100-octane fuel was destroyed, the barracks buildings were hit and a false gas alarm added to the confusion. Only four Buffaloes were now serviceable and, aware that all the station communications had been destroyed, Fowle ordered Allshorn to withdraw his squadron to Butterworth, 40 miles away opposite Penang Island, leaving only sufficient ground staff and aircrew to repair what damaged aircraft they could and fly them out. In response to an urgent order from Norgroup for a further reconnaissance over Singora, Kinninmont again took off. Again he was intercepted by enemy fighters—this time by five Zeros. Once more he outmanoeuvred them until, having used most of their ammunition in vain attempts to shoot the Buffalo down, they gave up the chase. Kinninmont reported about 40 ships in Singora harbour and the movement of enemy vehicles down the Singora-Alor Star road. He also saw enemy flying-boats alighting on the Singora lake.

[7] Quoted by permission from a personal record.

The movement to Butterworth was intended to be temporary—until Sungei Patani could be made serviceable again. The few remaining serviceable Blenheim fighters of No. 27 Squadron—aircraft that from the outset were, as Maltby has since recorded, "old and in poor condition"—were withdrawn to Singapore.[8] At dusk No. 21 Squadron's four airworthy Buffaloes flew in to Butterworth and the rest of the unit arrived by road. Conditions there were cheerless. There was reasonable expectation of an enemy air raid—the feeling that Butterworth was "next on the list"—and there were rumours, almost certainly of psychological origin, of an impending attack by enemy parachute troops. Pilots and ground staff had had no food that day but bread and bully beef, eaten hurriedly between flying, fighting, avoiding enemy air attacks and wrestling with unserviceable aircraft. Accommodation at Butterworth was poor and Allshorn quartered the squadron in and around two bungalows two miles from the airfield.

As mentioned, the main British military force in north Malaya was the 11th Indian Division, which had taken up positions forward of a partially prepared line at Jitra.[9] Demolition of bridges apparently had delayed the enemy's advance southward and the first encounter with them was made half an hour before midnight by advanced British patrols operating near Ban Sadao about 10 miles across the Thai border. There had been some opposition from Thai troops both in this area and farther south when a British force, known as "Krohcol", had crossed the frontier to the north-east beyond Kroh, intending to occupy a position on "the Ledge", a tactical feature on the Kroh-Patani road. This resistance lasted until next day, when the Thai Government issued a cease-fire order thereby indicating passive acceptance of the Japanese invasion. The delay to Krohcol's advance meant that the enemy reached the Ledge first and so gained an initial advantage.

When eleven Blenheim Mark I bombers of No. 62 Squadron failed to find the enemy ships off Kota Bharu they had turned north to Patani where, in the enemy's task force lying just off shore, they found targets in plenty. But the ships were well protected by fighter cover and their anti-aircraft batteries. The Blenheims were quickly intercepted by a formidable force of Zeros. Despite this they bombed from 8,000 feet though the crews failed to observe any effective results. The bombers had just landed again at Alor Star and were refuelling when twenty-seven Japanese Army Type-97 bombers swept over at 13,000 feet and pattern-bombed the airfield with 150-lb bombs, partly high explosive and partly incendiary. The bombing over, the enemy aircraft came in independently at low level and machine-gunned the Blenheims on the ground. Considering the weight of the attack and the circumstances, the casualties—seven men killed—

[8] "Its [No. 27 Squadron's] conversion into a bomber squadron . . . came up for consideration but could not be adopted owing to the need for retaining a night fighter unit."—Maltby, Despatch, para 79.

[9] The 11th Division had been ordered to be prepared for either the MATADOR offensive—which GHQ had been unwilling to abandon in case it might be practicable—or a defensive and therefore much less inspiring role in a position selected because of the possibility of MATADOR and in all other ways tactically weak.

were not heavy, but the squadron was left with only two serviceable aircraft. By strenuous efforts the ground staff managed to get seven of the Blenheims reasonably airworthy and, early on the following morning, these were flown to Butterworth. After the Japanese had made a second heavy attack on Alor Star, Air Vice-Marshal Pulford reluctantly decided that his force, slender enough as it was, must not be subjected to such attacks any longer and ordered the immediate evacuation of the airfield. To the men of 11th Indian Division who were defending Alor Star the psychological effect of the departure of the air force, to the dramatic accompaniment of fires and explosions caused by the demolition parties, was severe. Nothing could conceal from them the irony of the situation. The initial need to provide ground protection for this airfield had been accepted as an important responsibility. Now, after only a few hours of war, that need had been cancelled and they were left in a weak tactical position which that very responsibility had forced them to occupy, and facing the enemy with little prospect of any air support.

For the air assault on Malaya the Japanese Command had assigned the *3rd Air Division,* which had been transferred from the Japanese expeditionary force in China to the *Southern Army* in Indo-China under the command of Lieut-General Michiyo Suguwara, and the *22nd Air Flotilla* of the Navy's *XI Air Fleet.*[1] The *3rd Air Division* consisted of 10 air regiments—4 of fighters with 146 aircraft, 3 of heavy bombers and 3 of light bombers with a total of 172 and one reconnaissance regiment with 36.[2] The *22nd Air Flotilla* was composed of 3 air groups which together had 138 light bombers, 36 fighters and 6 reconnaissance aircraft, which brought the navy's total to 180 and the joint army-navy total to 534.

From the outset these air formations encountered serious difficulties. Deployment of the *3rd Air Division* from China was not completed until the day before the invasion of Malaya. Trouble had been experienced with airfield construction in Indo-China where the red clay soil became very boggy in the rainy season, and the "anti-Japanese attitude" of the Indo-Chinese had made it difficult to obtain sufficient local currency for military occupation and development. Through lack of local supplies, and shipping space from Japan, equipment and building materials were hard to obtain and the accumulation of fuel and ammunition was "not too successful". Deliveries of detachable aircraft fuel tanks and "pom-pom" shells were "very few", and the corps obtained barely sufficient for its immediate needs just before the battle began by establishing its own communication and transport service to Japan.

[1] Accounts of operations from the Japanese viewpoint have been compiled from translations of a variety of official documents and of interrogations of members of the Japanese forces, notably Air Operations in Malaya and the South-West Area, Nov 1941-Feb 1942 (Japanese Studies in World War II, No. 86, Hist. Div. US Army).

[2] The term "heavy bomber" as applied to these Japanese aircraft is somewhat misleading. For example one model of the twin-engined Mitsubishi Army Type-97 heavy bomber carried 2,200 lb of bombs about 1,635 miles. In comparison the British Handley Page Halifax of the day was four-engined, and could carry 12,000 lb about 2,000 miles.

The invasion plan provided that the Japanese *XXV Army* should land its spearhead—the major part of the *5th Division*—in southern Thailand for an immediate advance into Malaya to a line on the Perak River, with the capture of airfields as a major objective and the ground forces and *3rd Air Division* elements advancing together. Heavy monsoonal weather, which had so sheltered the approach of the Japanese convoy, caused one escort squadron to miss it altogether and another was forced to return to Indo-China with two aircraft missing, one forced down (presumably at sea) and two seriously damaged in forced landings. Phnom Penh airfield, where *3rd Air Division* had its headquarters, was deluged by a heavy rain squall just before the first air attacks on Malaya were to begin. The airfield became unserviceable and the aircraft were temporarily grounded so that only one formation (from Saigon) attacked as planned.

Conditions for the landing at Kota Bharu were bad. The swell was so heavy that a number of landing-craft capsized with some loss of life. There was no supporting fire from the warships for the actual landing and the troops came ashore in three separate "flights". Since the same landing craft had to be used for each flight there was an interval of about an hour between each operation (thus giving the aircraft attacking them time to make many sorties). The sighting of "twin-engined fighters" on Kota Bharu airfield (presumably a mistaken description of the R.A.A.F. Hudsons) was reported by the pilots of one Japanese formation which, "because of an agreement with *XXV Army*", returned without attacking. The purpose of this agreement is not clear; presumably it concerned some precautionary measure to protect a special ground detachment which was ordered to capture the airfield.[3] Instructions for the invasion included this exacting order:

> Immediately after landing, the advance unit of the *XXV Army* . . . without losing a minute, will advance a portion of the Fighter and Light bombardment unit. After they capture and repair the airfield the main force will advance to make the aerial exterminating campaign a greater success.

Records of the actual operation to capture the airfield are confused but they disclose that the air commander, hearing that it had been occupied, prepared to advance there because his fighter units were now lacking detachable fuel tanks. The report of the occupation proved to be false and that evening the *XXV Army* commander asked *3rd Air Division* to attack grounded aircraft at Kota Bharu.[4] The need for air bases in Malaya was urgent not only because of the lack of "belly" tanks for the fighters but because the penalty for operating bombers from Indo-China was heavy. From one air regiment five aircraft, including the commander's plane, were lost and presumed to have crashed in the Indo-Chinese jungle in darkness

[3] Japanese records contain several references to the specific exception of Kota Bharu airfield from the list of targets, yet as RAAF records show there were five separate raids on this airfield on 8th December.

[4] Apparently the Japanese air commander was unaware of the British withdrawal from Kota Bharu that night, for next day aircraft were sent to attack the airfield; they were diverted only when they saw their own ground troops in the act of occupying it. One report suggests that they bombed these troops before realising their error.

and bad weather. Another formation—58 light bombers with 5 fighters as escort—"failed to reach the battle area" because of the weather. The assault on the airfields in north-western Malaya was made initially by a force of 73 heavy bombers and 18 fighters which operated in sections. They claimed the destruction of 23 grounded British aircraft, with three of their own damaged and forced to land.

In the Singora-Patani landings some of the craft carrying the first flight either overturned or grounded in the heavy surf and could not be retrieved and there was much delay in getting heavy material ashore. The main army force landed at Singora between 4 and 5 a.m. and a separate section went ashore at Patani to occupy the airfields. These they found deluged by the monsoonal rains and in very poor condition because of bad drainage.[5] The first air detachment reached Singora between 11 a.m. and 1 p.m. on 8th December and immediately sent up fighter patrols.

While the *3rd Air Division* supported specifically army operations *22nd Air Flotilla* had a wide assignment—"the destruction of enemy air power in North British Malaya" and specific operations to the south; it was this force which raided Singapore. All the initial air operations appear to have been undertaken with a minimum of Intelligence information, the vagueness of which is illustrated by a summary in the Japanese records which reads:

> Although the position of the British Air Force in Malaya was not clear it was known that new airfields and bomb shelters were being constructed. The main strength of the air force seemed to be stationed in Singapore with about three squadrons of two-engined medium bombers scattered about the Kota Bharu airfield. The Bay of Siam seemed to be guarded closely.

As the first wave of Japanese invasion troops was coming ashore at Kota Bharu a destroyer of the United States Pacific Fleet, patrolling off Pearl Harbour, Hawaii, more than 6,000 miles away, sank a small Japanese submarine. This warlike action early on Sunday morning, 7th December,[6] was reported to the watch officer at the naval base but no alert was sounded for the 70 ships of the fleet (including eight battleships) most of which were then lying quietly at their moorings.[7] Ashore, at the various bases and airfields on Oahu Island, the same conditions applied, though again there was cause for a general warning when, at 7 a.m., a radar station which was then being operated for instruction only, plotted a formation of aircraft about 130 miles to the north. In the knowledge of certain "friendly" aircraft movements this was not regarded as significant.[8] But these aircraft *were* Japanese. A few minutes before 8 o'clock

[5] The airfields were not fully operational for about two weeks and there were many aircraft accidents.

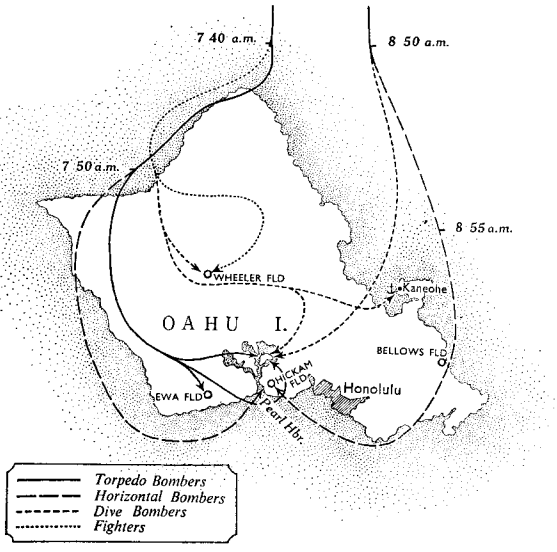
[6] The International Date Line, which lies between the two points, accounts for the fact that 4.30 a.m. on Monday, 8th December, at Kota Bharu, was approximately 6.30 a.m. on Sunday, 7th December, at Pearl Harbour.

[7] In addition to 8 battleships, there were 2 heavy cruisers, 6 light cruisers, 29 destroyers, 5 submarines, a gunboat, 9 minelayers, 10 minesweepers and 24 auxiliary vessels in harbour (except for the destroyer patrols close offshore).

[8] As noted earlier, Flying Fortresses were expected that morning from the mainland on their way to the Philippines.

there was a bomb explosion, the first in an air attack the magnitude of which soon staggered the defenders. Three minutes after that first explosion a signal, flashed to Washington, read: "Air raid Pearl Harbour—this is no drill."

Within the next hour the great fleet, the naval base at Ford Island, the naval seaplane base at Kaneohe, the marine airfield at Ewa, and the three army airfields, Hickam, Wheeler and Bellows, were subjected to an onslaught by torpedo dive-bombing, medium - altitude bombing and low-level gunnery attacks. When the Japanese aircraft withdrew the defenders were left to take stock of heavy losses of life, in ships, and in aircraft. The casualties (largely naval) totalled 2,403 killed and 1,178 wounded.



Six of the battleships had been sunk, grounded or capsized, the other two damaged, and other ships also severely damaged. In aircraft the army had lost 96 (with a further 30 seriously damaged) and the navy 87, a total of 213. As the aircraft strength before the attack was 400 (231 army and 169 navy) the two Services now had only 187 serviceable aircraft on the island between them.[9] A considerable amount of valuable equipment was also destroyed. To counter these losses there were two compensations: the shore installations though damaged were still intact and, perhaps more important, the aircraft carriers of the Pacific Fleet, fortunately absent from the base on special missions, were safe.[1] Retaliation by the American air units has since been described as "pitiful" in its effects on the attackers, for the enemy had achieved "the crushing advantage of surprise".[2] Not only were the defenders unable to retaliate

[9] To these losses were added 6 dive bombers which flew in from the carrier *Enterprise* while the attack was in progress and one of 12 Flying Fortresses which were staging through to the Philippines.

[1] A carrier striking force, commanded by Vice-Admiral W. F. Halsey in *Enterprise*, was returning to Pearl Harbour after delivering a Marine fighter squadron to Wake Island. This force was joined by another which included the carrier *Lexington* and which had been delivering a Marine scout-bomber squadron to Midway Island (the last 400-miles stage being flown by the aircraft).

[2] Craven and Cate (Editors), *The Army Air Forces in World War II*, Vol I, p. 198.

adequately while being attacked; they were afterwards quite unable to locate the enemy carrier force which disappeared without interception.

Japanese accounts later revealed that six carriers with a powerful surface escort and with 423 aircraft on board (more than the combined American navy and army aircraft strength on Oahu Island) were deployed for the Pearl Harbour operation.[3] Having made rendezvous in the Kurile Islands these ships, screened by fogs, steamed undetected to the selected strike position about 200 miles north from Oahu. There was an advance force of 27 submarines 5 of which each carried a "midget" submarine. (It was one of these two-man craft that was sunk by the American destroyer off Pearl Harbour.) Starting before dawn on 7th December, formation after formation took off from the carriers until 353 aircraft were airborne. Their secret had been well kept although, as early as 5th October, 100 pilots selected as a "spearhead" had been told just what their target would be, with the added comment that the United States would be unable to recover from their blow before the Malayan Peninsula, the Philippine Islands and the Dutch East Indies had been occupied.[4] This confidence had its foundation in the knowledge that a carrier-borne air strike was perhaps the most difficult form of attack to detect and intercept, and in the added knowledge that this one would be made under cover of the pretence of continued diplomatic negotiations in Washington. Its very audacity, therefore, had tactical value. The attack itself cost the Japanese 29 aircraft to which was added 20 or more aircraft smashed in re-alighting on the carriers in rough weather, with about as many more damaged in the same way; a very small cost for what had been achieved.

In the chronological order of the Japanese operations on their first day of war, Thailand's turn came next. Abrupt use had been taken of her territory in the extreme south on the Kra Isthmus by landing troops at Singora and Patani, but complete subjugation was a part of Japan's overall plan. Thus the *XV Army* advanced across the border from Indo-China at 5.30 a.m. Its initial task was the occupation of the capital and the main Thai airfields. In advance of this force a smaller formation proceeded by sea to Bangkok, making a swift move calculated to overawe the Thai Government. It did; there was no resistance. News that the invasion had been bloodless reached the commander of the *3rd Air Division* only just in time to prevent him from making it very much the reverse by attacking Dong Muang airfield just north of Bangkok; an attack he had planned in considerable strength because he believed there were 50 enemy aircraft assembled there. Thereafter the *XV Army* began to transform Thailand into a military base from which to cover not only the Malayan operations but a westward advance when the time came.

The setting for the next Japanese attack was in the North Pacific Ocean. The American base on Guam Island, lying about 1,500 miles due east of the Philippines, was only 70 miles from the Japanese base on Saipan and thus was much too well placed strategically to be ignored. The United States garrison—365 marines and certain attached naval troops (plus a

[3] This was an unusually large complement of aircraft for a carrier force in those days; two air groups had been added from carriers not in the force. About 100 of the attacking aircraft were orthodox bombers, 40 torpedo bombers, 131 dive bombers and 79 Zero fighters.

[4] S. E. Morison, *The Rising Sun in the Pacific 1931-April 1942* (1948), pp. 85-6, Vol III in the series *History of United States Naval Operations in World War II.*

small native force) were convinced, as already noted, that they were "certain to be picked off" when war came. Justification for this conviction was not long in coming. About 8.30 a.m. a formation of Japanese aircraft swept down from Saipan and attacked the island. The marines' headquarters and most of the installations were damaged and a naval vessel sunk. The garrison, with no adequate anti-aircraft defences, was obliged to endure the bombing and then await events.

Less than two hours after the attack on Guam Japanese bombers were delivering another blow. This time the target was the British town of Kowloon on the peninsula opposite Hong Kong Island. When the attack came the British forces carried out the demolitions for which they had prepared and withdrew to Hong Kong just as the leading Japanese troops crossed the frontier. As the garrison prepared for a desperate defence the island was sealed off by a Japanese naval blockade.

Wake Island—a triangular formation of coral atolls 2,300 miles west of Honolulu—came next on the Japanese list. Like Guam, Wake had no significance until long-range aviation gave it identity. It had a garrison of 449 marines and small parties of attached troops. Pan-American Airways, who had first opened the base for civil air purposes, still had a staff of 70 on the island together with about 1,150 contractors' employees. For air defence there was the squadron of Grumman Wildcat fighters that had been flown off the carrier *Enterprise* four days earlier, but installations for air operations were very inadequate. News of the attack on Pearl Harbour had just reached the garrison when, about noon, a force of 36 bombers descended on them. There was no warning, even the roar of the surf serving the enemy by drowning the sound of their approaching aircraft. Some of the grounded Wildcats suffered but the damage was not extensive. The garrison's only real hope of survival lay in a naval operation that might bring them relief.

In Manila the first warning to the headquarters of General MacArthur and Admiral Hart came about 3 a.m. when they learned that the duty staff watching the radar screen at Iba on the west coast had picked up the tracks of a formation of aircraft moving southward from Formosa. There could be no doubt that it was Japanese. A Kittyhawk squadron took off and flew into the darkness. Their course was accurate but they had no knowledge of the altitude of the Japanese formation. Watchers at the Iba radar screen saw the tracks of the opposing formations converge. Just as they did so the Japanese formation turned back. The American pilots returned puzzled and frustrated.

At naval headquarters in Manila about this time a radio operator intercepted the warning message that had been sent out from Pearl Harbour, 5,000 miles away: "Air raid Pearl Harbour; this is no drill." The operator in Manila had no doubt that this was a genuine signal; he had recognised

the transmitting technique of the sender. Immediately the news was passed to Admiral Hart who in turn passed it to General MacArthur's headquarters and to Air Headquarters. About 4 a.m. General Brereton rang Colonel Eubank, of the Bomber Command, informed him of the Pearl Harbour attack, and told him to prepare all the Flying Fortresses at Clark Field (two squadrons) for a mission. The target—Formosa—was already known to Eubank as the operation had been outlined in advance. At 5.30 a.m. an official statement was released from General Headquarters announcing that Pearl Harbour had been heavily attacked by Japanese submarines and planes and that a state of war existed between the United States and Japan.[5] But most of the servicemen in the Philippines learned unofficially that Pearl Harbour had been attacked when their radio sets picked up a news broadcast from the United States. Eubank was called at daylight to a staff conference at Far East Air Force Headquarters at Nielson Field outside Manila. In the absence of Brereton, who had been summoned to General Headquarters, this conference unanimously decided that the Fortresses should strike at Takao Harbour, Formosa, without delay. Brereton returned from G.H.Q. about 8 a.m. having sought and been refused permission for just such an operation. To his eager staff officers he replied, "No. We can't attack till we're fired on," adding that he had been told to prepare the Flying Fortresses for action but not to act until ordered.[6] His staff was incredulous. To them, as to him, an immediate strike on Formosa *before* the enemy could attack was the only logical course since the only defensive value of the heavy bombers lay in their offensive power.[7] But the order had to be obeyed.

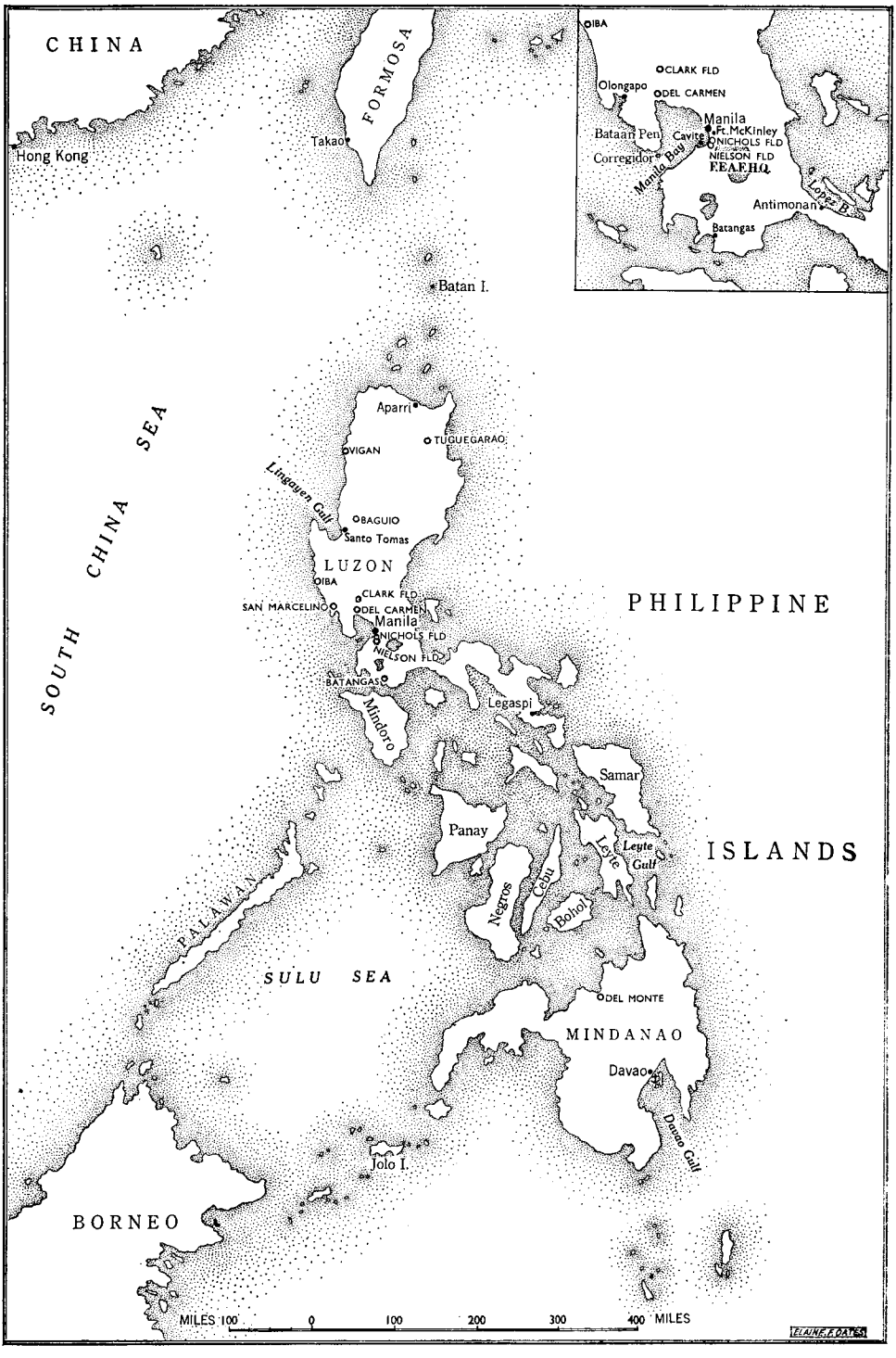
Apparently General Headquarters in Manila were as yet unaware that a Japanese force had made a dawn bombing attack on the Philippine radio station at Aparri, in the extreme north of Luzon, or that Japanese dive bombers had destroyed two American navy Catalinas on the water in Davao Gulf at the other extremity of the Philippines. About 8 a.m. a large force of Japanese bombers was reported to be bearing down on Lingayen Gulf. American fighters were already patrolling to the north and more fighters took off from Nichols Field on receipt of the news. This time the targets were Baguio, in western Luzon, and Tuguegarao, a town farther north and east. Some of the patrolling fighters sighted the force that had bombed Baguio but only two were able to gain the enemy's altitude and all that happened was an exchange of gunfire without result. On hearing of these attacks, Brereton, as he later asserted, asked Brigadier-General Sutherland, General MacArthur's chief of staff, for authority for offensive action. Apparently his request was again refused, or at least deferred.[8] About 11 o'clock authority for "bombing missions" by the

[5] Walter D. Edmonds, *They Fought With What They Had* (1951), p. 75.

[6] Edmonds, p. 81.

[7] Craven and Cate, Vol I, p. 204.

[8] This interchange on the subject of authority for an offensive operation by the Fortresses has since been a controversial issue. Brereton's own statement (as in his *Diaries,* pp. 38-9) was later contradicted by MacArthur who relied on the evidence of Sutherland who, in turn, held Brereton responsible. The American official historians found that the weight of evidence appeared to lie with Brereton's account. (Craven and Cate, Vol I, pp. 204-8.)



The Philippine Islands

Flying Fortresses was received at Air Headquarters, and the two squadrons at Del Monte, in Mindanao, were ordered to move up that night and prepare for an offensive operation at daylight. At Clark Field all the Fortresses but two which were on reconnaissance patrols and all the aircraft of the two fighter squadrons based there and which had been flying patrols for two hours and a half were on the ground. A staff meeting at No. 19 Bombardment Group Headquarters was planning the attack on Formosa.

It was then about 12.30 p.m. Without warning 54 Japanese bombers in two V formations appeared over the airfield at rather more than 18,000 feet. The Kittyhawk fighters, which had just been refuelled, were lining up. Four of these aircraft immediately took off and became airborne. Five others were making the take-off run and another five were lined up at the end of the runway when the first bombs burst among them; all ten aircraft were destroyed. The bombing continued, accurate and intense. Men were killed or wounded as they ran for cover, a field hospital was demolished, most of the buildings were soon on fire and fuel dumps blazing. The communications centre was put out of operation so that, after an initial call for fighter cover, the airfield was completely isolated. The bombers then withdrew and the task of gathering in the casualties had just begun when a fighter attack began. By chance most of the Flying Fortresses had escaped in the bombing attack but their turn came now. Zero pilots using tracer ammunition flew so low and came so suddenly out of the clouds of smoke that rose from the burning buildings and dumps that the anti-aircraft gunners found it almost impossible to get them within their sights. By the time this attack was over Service casualties had mounted to about 100 dead and 250 wounded. All the aircraft on the ground—practically the entire strength of the base—had been destroyed except two or three Fortresses which, though damaged, were repairable.

The four Kittyhawks that succeeded in taking off received support from a few other fighters, the pilots of which had heard through the confused babel of radio messages that filled the air at the time the single call for help transmitted from Clark Field. In brave though uncoordinated battle these pilots, while destroying some enemy aircraft, themselves suffered loss and were unable to counter the enemy effectively. While Clark Field was being blasted a Kittyhawk squadron that had been searching for enemy aircraft over the South China Sea returned to Iba with their fuel tanks almost empty. As they were about to land a force of enemy bombers attacked. In the combat that followed five of the Kittyhawks were shot down and three others crash-landed on near-by beaches with their fuel exhausted. Only two escaped. The precious radar unit was destroyed. When the reckoning came that evening the Far East Air Force had lost one half of its heavy bomber strength, about 55 Kittyhawks and 25 miscellaneous aircraft.

In the failure to order an air offensive against Formosa that morning General Headquarters had created a situation that was comparable with

that in Malaya when General Headquarters there decided not to order the MATADOR operation. The basic reason appears to have been the same. In retrospect General Brereton summarised the Philippines issue thus:

Neither General MacArthur nor General Sutherland ever told me why authority was withheld to attack Formosa after the Japs had attacked Pearl Harbour. I have always felt that General MacArthur may possibly have been under orders from Washington not to attack unless attacked. If it was a decision that had been reached in Washington that he was trying to change via radio telephone, this may explain the "strictly defensive" attitude under which we operated that fateful morning. General MacArthur's position was a peculiar one because he occupied a dual role as Marshal of the Philippine Army and commander of the U.S. Forces in the Far East. Owing to the political relationship between the Philippine Commonwealth and the United States it is entirely possible that the Pearl Harbor attack might not have been construed as an overt act against the Philippines.[9]

Whatever the full explanation of the issue may have been, as in Malaya the cost of withholding the attack was a bitter one.

In the Japanese account of these operations against the Philippines the emphasis is laid on their own surprise at the extent of the surprise they achieved. They held that the success of their attack depended on whether American air strength could be crushed at one blow and they were apprehensive about the possibility of failure. The confident attitude adopted towards their earlier operations was absent here. Naval land-based aircraft were their main striking forces—the *21st* and *23rd Air Flotillas* of *XI Air Fleet*—with a total of 308 aircraft. Formations of the army air force with 144 aircraft, also based on Formosa, were assigned to cooperate. One great problem in the early planning stages had been the inability of their fighter aircraft to cover the long stage (550 nautical miles) between Formosa and southern Luzon. But before the beginning of December the long-range Zero was in service and, the problem answered, the attack plan was revised to depend entirely on these aircraft for fighter operations. The first air attacks were to be made at sunrise to allow the most effective bombing and the best conditions for fighter combat. Thick cloud and dense fog upset this plan and take-off was not until 9.30 a.m. The Japanese then assumed (correctly) that the defenders of the Philippines would have learned of the attack on Pearl Harbour and that, therefore, strong resistance could be expected. The weakness of the American defence, a very encouraging surprise, and the undoubted success of their attacks, left them convinced that their air supremacy had been "conclusively established".[1]

To the British and American naval, army and air commands in the Far East the first 24 hours of war against Japan had produced startling evidence of their under-estimation of the enemy's capacity and of the extent to which their own combat strength was lacking. As for Australia, her role had changed overnight from that of contributor to Britain's fighting forces in distant theatres to that of a nation that might have to fight for her own survival.

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[9] Brereton, p. 39.

[1] Naval Operations in the Invasion of the Philippines Autumn 1941-January 1942. (Japanese Studies in World War II, No. 13, Hist. Div. US Army.)

CHAPTER 11

THE PRICE OF HESITATION

MEMBERS of the Australian War Cabinet, assembled in Canberra on 8th December, heard the Secretary read a terse signal from the British Admiralty:

Commence hostilities against Japan repetition Japan at once.

The War Cabinet's first action was to agree that this situation should be accepted as involving a state of war with Japan. That formality over, the views of the Chiefs of Staff were heard. The Second Naval Member, Commodore Durnford,[1] who was acting in place of the Chief of the Naval Staff, Sir Guy Royle[2] (absent in Singapore) reported that all shipping in the northern area was falling back on Rabaul and Port Moresby; that army reinforcements for Rabaul on board the troopship *Katoomba* had been held at Port Moresby, and that all coastwatchers had been warned.

There were reports of Japanese air attacks on Nauru and Ocean Island —islands from which Australia and New Zealand obtained their supplies of phosphate rock for the manufacture of artificial fertiliser. As yet the War Cabinet had no details of these attacks and the fate of the small garrisons and staffs on the islands could only be guessed at. It was known that preparations had been made for the demolition of the machinery on the islands so that it would be denied to the enemy. On both Ocean Island and Nauru there was a garrison of 50 A.I.F. troops with two 18-pounder field guns. Commodore Durnford told the War Cabinet that an air attack from a Japanese aircraft carrier was unlikely in the early stages of the war; cruiser escort would be needed for such an operation. The Japanese had some fast merchant cruisers which probably were already in the South Pacific, and attacks on shipping could be expected. The R.A.N's escort capacity was limited but was sufficient to deal with an attack by armed merchant cruisers or a limited cruiser attack. An assault on Rabaul was possible.

The Chief of the General Staff, Lieut-General Sturdee, reported that the reinforcement of Port Moresby and Rabaul by a battalion at each base was being considered. The importance of Rabaul to the United States was emphasised in discussion. The Commander-in-Chief of the Netherlands East Indies had asked for and General Sturdee had approved the immediate dispatch of A.I.F. troops to Koepang. Air cover would be available for most of their journey from Darwin in the troopships *Zealandia* and *Westralia* and the Naval Staff therefore preferred immediate move-

[1] Vice-Adm J. W. Durnford, CB; RN. Comd HMS *Suffolk* 1939-40; 2nd Naval Member Aust Naval Bd 1940-42; comd HMS *Resolution* 1942-43. Director Naval Training Admiralty 1944-47. B. 25 Oct 1891.

[2] Admiral Sir Guy Royle, KCB, CMG; RN. 5th Sea Lord 1940-41; Chief of Naval Air Services 1939-41; 1st Naval Member and CNS 1941-45. B. 1885. Died 4 Jan 1954.

ment to a delay of four days until H.M.A.S. *Adelaide* could arrive from Port Moresby. This was confirmed by the War Cabinet. The Chief of the Air Staff, Air Chief Marshal Burnett, explained that Namlea on Buru Island would not be reinforced by the R.A.A.F. until he was satisfied that the base was adequately guarded—a subject that would be reviewed with the Dutch authorities. He also emphasised the importance of airfield construction in New Caledonia as required by the United States forces.

The War Cabinet also surveyed the question of the return of No. 10 Squadron from Britain and No. 3 Squadron from Libya, taking into consideration the lack of combat units in Australia and the great value of these well-trained squadrons for operations either in Australia or the Far East. Some thought was given to the effect on the morale of the Australian forces in the Middle East of an assurance that action was being taken to safeguard their homes in Australia. The Chief of the Air Staff referred to the difficulty in bringing No. 3 Squadron back to Australia because its aircraft must come by sea. He was asked whether, in the light of local defence needs and the difficulty in providing naval escorts, the dispatch overseas of further contingents of E.A.T.S. trainees should be continued. The Minister for Air (Mr Drakeford) asked whether senior R.A.A.F. officers then abroad should not be recalled (Air Vice-Marshal Bostock was an example), but the War Cabinet decided that no such action should be taken immediately. A decision, made on 5th December, that one of the Empire flying-boats should be returned to Qantas Empire Airways by the R.A.A.F. was cancelled. The Chief of the Air Staff reported that, though there was a shortage of 250-lb bombs he considered that the air force held sufficient stocks to carry out bombing operations for three or four months. The War Cabinet then called on the Chiefs of Staff for an appreciation covering Australia and the adjacent areas, showing the possible forms of enemy attack, the scale of defence needed, the strengths of the Australian forces available to meet such attacks and their disposition at this time, together with a report on the state of training and equipment.

Next day Mr Curtin told the Advisory War Council that the Commonwealth would have to consider whether its manpower should be held for the defence of Australia. He said that he had asked the British Government to make an immediate review of the Empire Air Training Scheme resources in keeping with the assurance given to Mr Menzies in April 1941. After noting a message from Air Chief Marshal Brooke-Popham, in which he expressed his command's urgent need for long-range bombers, the council turned to the problem of Portuguese Timor. Timor had high strategic importance. If Japan should extend the economic influence she already held over Portuguese Timor into the military sphere—and her civil aviation agreement with Timor was regarded with misgivings—a serious threat to both the Dutch East Indian possessions and to Australia could develop. Dili, the Portuguese capital, had both an airfield and a flying-boat base and was garrisoned by an insignificant force. When in

November 1941 Japan's demeanour had become increasingly menacing, the politically-delicate venture of offering the Portuguese authorities protection and placing a combined Australian and Dutch military force in Dili was agreed to. The original plan for moving these Allied troops by land from Koepang was rejected because, in the monsoon season, the roads had become almost impassable. Therefore the movement was to be made by sea.

General Sturdee now reported that the 2/2nd Independent Company of the A.I.F. (about 250 men), which had been included in the force about to be dispatched to Koepang, would be available to move into Portuguese Timor if necessary, but the Minister for External Affairs, Dr Evatt,[3] pointed to the difficulty created by the decision of the Portuguese Government to accept outside military aid only if the Japanese attacked their territory. It was agreed that, through the British Dominions Office, the Portuguese Government should be asked to authorise the Governor of Timor to request such aid. On the same day the War Cabinet affirmed the principle that Australian defence called for the return of Nos. 10 and 3 Squadrons, but added the qualification that, recognising the importance of the roles allotted to these units, the Government would not press for their return if their equivalent in aircraft strength could be made available—preferably in Catalinas. The War Cabinet also decided that the three R.A.A.F. squadrons in Malaya would remain there, that no further E.A.T.S. drafts would go overseas "for the present" because of the difficulty of providing naval escort, that an additional 500 women would be recruited for the W.A.A.A.F., and that, to avoid delays, Service Ministers would be permitted to initiate urgent defence measures for works and supply on their own authority.

A plea put forward by Mr Curtin on 7th November, when Mr Duff Cooper had outlined for the Advisory War Council the British plan to set up a defence council at Singapore, was revived on 11th December when the War Cabinet decided to ask the British Government to establish "a supreme authority for the higher direction and coordinated control of Allied activities and strategy in the war in the Pacific—preferably at Singapore".

> We think it is essential to arrange for closer Australian association with the direction of the war in the Pacific (the War Cabinet's telegram stated) and have in mind the appointment of a representative of the Commonwealth Government to work in close touch with Mr Duff Cooper at Singapore.

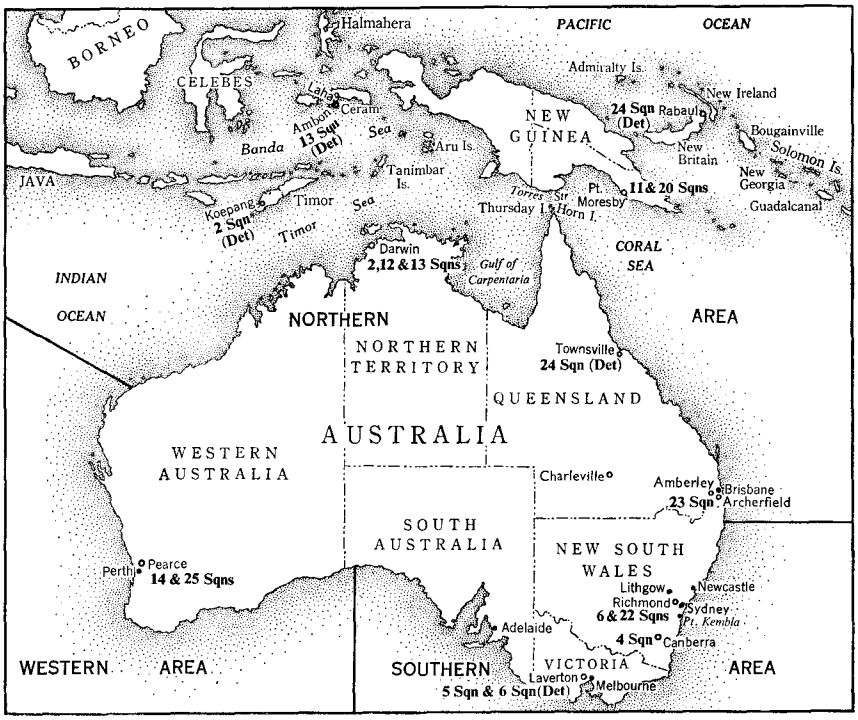
On 12th December the Chiefs of Staff were asked for a supplementary appreciation on the best disposition of the Australian forces to defend

(*a*) Newcastle, Sydney, Port Kembla and Lithgow.
(*b*) Darwin, Port Moresby and the islands to the north-east of Australia including New Caledonia.

In their main appreciation, dated 11th December, the Chiefs of Staff said that the most probable forms of attack would be against the outlying

[3] Rt Hon H. V. Evatt. MLA NSW 1925-30; Justice of High Court of Aust 1930-40; MHR 1940-60. Attorney-General and Min External Affrs 1941-49. Chief Justice of New South Wales since 1960. B. East Maitland, NSW, 30 Apr 1894.

island bases, Darwin, and the Australian mainland, in that order. The first would probably take the form of attempts to occupy Rabaul, Port Moresby and New Caledonia; the second would become a strong possibility if Singapore and the Dutch East Indies were captured, and the most probable form of attack on the mainland would be naval and air bombardment of works in vital areas. Defeat of the Allied naval forces or the occupation of bases to the north-east "would enable the Japanese to invade Australia". A minimum scale of defence for each of the three



R.A.A.F. dispositions and areas of responsibility, 12th December 1941

armed Services was set out in relation to the varying and probable scales of enemy attack—a division of Japanese troops with naval escort, attacking Rabaul, Port Moresby, New Caledonia or Timor; raids on or an attempt to occupy Darwin; and three possible phases of attack on the mainland; direct naval attack, seaborne raids, and assault by a force of, say, eight divisions with ancillary units. The minimum air force strength needed to meet these was: 5 squadrons for Rabaul, 5 for Port Moresby, one squadron and 2 flights for New Caledonia, 2 squadrons for Timor, 3 squadrons and one flight for Darwin, 30 squadrons to meet a naval attack or seaborne raids on mainland centres other than Darwin, and 60 squadrons to counter a major military assault.

The existing strength of the R.A.A.F. in squadrons and aircraft and their disposition at the time are shown in the accompanying table.

First Line

			Wirraways		
No.	4 Squadron	Canberra	12	aircraft	
,,	5 ,,	Laverton	12	,,	
,,	12 ,,	Darwin	18	,,	
,,	22 ,,	Richmond	17	,,	
,,	23 ,,	Archerfield	12	,,	
,,	24 ,,	Townsville	12	,,	(ordered to Rabaul)
,,	25 ,,	Pearce	18	,,	
			101		
			Hudsons		
,,	2 ,,	Darwin	8	,,	(ordered to Koepang)
,,	2 ,,	Koepang	4	,,	
,,	6 ,,	Richmond	6	,,	
,,	6 ,,	Laverton	4	,,	
,,	7 ,,	Darwin (attached 2 Sqn.)	Nil	,,	
,,	13 ,,	Darwin	6	,,	(2 ordered to Laha)
,,	13 ,,	Laha	6	,,	
,,	14 ,,	Pearce	12	,,	
,,	23 ,,	Archerfield	3	,,	
,,	24 ,,	Rabaul	4	,,	
			53[4]		
			Catalinas		
,,	11 ,,	Port Moresby	6	,,	
,,	20 ,,	Port Moresby	6	,,	
			12		
			Seagulls		
,,	9 ,,	Richmond	11		6 shipborne and 5 land-based aircraft
		Total first-line aircraft	177		

Second Line (Reserve)[5]

			Fairey Battles		
,,	1 B.A.G.S.	Evans Head	36	,,	
,,	2 ,,	Port Pirie	36	,,	
			Wirraways		
,,	2 S.F.T.S.	Wagga	36	,,	
,,	5 ,,	Uranquinty	36	,,	
,,	6 ,,	Deniliquin	36	,,	
			Ansons		
G.R. School		Laverton	18	,,	
			Ansons (unclassified reserve)		
No.	3 S.F.T.S.	Amberley	54	,,	
,,	4 ,,	Geraldton	54	,,	
		Total reserve aircraft	306		

[4] Nos. 23 and 24 Squadrons were of the composite type, having both Hudsons and Wirraways on strength.

[5] Crews in the reserve squadrons were not operationally trained.

The scale of R.A.A.F. training was:

Catalinas	14	crews	fully trained
Seagulls	3	„	„ „
	3	„	half „
Hudsons	40	„	fully „
	5	„	half „
	1	crew	quarter „
Wirraways	45	crews	fully „
	25	„	half „
	17	„	quarter „

In their supplementary appreciation dated 15th December the Chiefs of Staff regarded the industrial area represented by Newcastle, Sydney, Port Kembla and Lithgow as of such importance that they declared that "its defence to the limit of our capacity must not be compromised". They therefore allotted the highest priority to the forces assigned to this area and to those designated for their reinforcement. Of Darwin's defences they reported that the forces withdrawn from that area for service in the Netherlands East Indies were being replaced, that the anti-aircraft defences were relatively strong and that, though an increase in these defences was desirable, Darwin being the only Allied main fleet base at the eastern end of the Malay Barrier, this could not be achieved except at the expense of the vital industrial area in New South Wales.

If the enemy established a base in the islands to the north-east of Australia, an attack on Allied coastal and Pacific sea trade could be developed, operations against Australia would be facilitated, and a link in the Allied trans-Pacific air route would be denied. Key points were Port Moresby, Rabaul, New Caledonia and Suva. Port Moresby's ground defences consisted of one battalion, two coast guns and four anti-aircraft guns. Four more anti-aircraft guns were on the way. This garrison should be increased to one brigade group and the air force strength to the full capacity of the operational airfields.

Reviewing the situation at Rabaul the appreciation noted that the United States-Australian proposal to make it a fleet base for British and American naval forces was "now unlikely". The function of the garrison there was to protect the air base.

> We do not consider reinforcement is possible in view of the hazard of transporting forces from the mainland and maintaining them (the Chiefs of Staff reported) but we consider it necessary to maintain an advanced observation line to obtain indications of enemy movement south. We must therefore rule out any question of withdrawal.

The problem of safe sea passage for the Rabaul garrison and remaining civil population was regarded as no less acute than that of reinforcement and a further point to be considered was the fact that a voluntary withdrawal would have a psychological effect on the Dutch in the Netherlands East Indies.[6]

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[6] By direction of the War Cabinet (12th December 1941) children and women other than missionaries who might wish to remain, and nurses, were ordered to be evacuated compulsorily from both Papua and New Guinea.

In recommending that the existing garrison in Rabaul should be retained the Chiefs of Staff emphasised that the scale of attack which could be brought against Rabaul from bases in the Japanese Mandated Islands was beyond the capacity of the small garrison to defeat. Despite this the enemy must be made to fight for this forward observation line instead of gaining it at the first threat. It might be that sufficient naval forces would become available for the reinforcement and supply of Rabaul if American naval units should fall back on Darwin.[7]

New Caledonia—a link in the joint United States-Australian chain of air bases—could become a base for enemy operations against Allied shipping and its denial to the enemy was more important than its use to the Allied forces. Having made this point the appreciation went on to emphasise that a division of troops with strong air support would be needed to defend it, and Australia could neither provide nor support such a force. The 2/3rd Independent Company was leaving Sydney on 16th December "to enhance the morale of the Free French forces and for demolition purposes". Suva, the Chiefs of Staff regarded as "of first importance", and they recommended that, though its defence was primarily a New Zealand responsibility, Australia should inquire in what way assistance might be given for that task.

Increased reconnaissance operations were among the first and most obvious demands the Pacific war made on the R.A.A.F. in the Australian area. Among the tasks that fell to the squadrons so engaged was that of policing the Japanese pearling luggers still in the area. On 8th December a Catalina from No. 11 Squadron, piloted by Flying Officer Sloan[8] with Flight Lieutenant Reid[9] as second pilot, sighted three of these luggers and ordered them to proceed to Thursday Island. After a patrol lasting nearly ten hours this Catalina returned to Port Moresby. Two hours later the same crew in another Catalina took off again, this time in darkness, to make another search but the aircraft crashed into a hillside to the west of the town and all the crew were killed. These were the first R.A.A.F. casualties in the war in the Pacific.[1] The Hudsons of No. 24 Squadron operating from Rabaul joined with No. 11 Squadron and No. 20 Squadron in their exacting reconnaissance flights, area patrols and clearing searches for Allied shipping.

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[7] In retrospect (February 1948) Lt-Gen Sturdee and Maj-Gen Rowell who were respectively CGS and DCGS at the time this appreciation was written, noted the situation thus: "Whatever the number of troops deployed the effective defence of bases to which they would have to be moved would not have been possible without naval and air forces sufficient to support the land forces in this defence and to keep open the lines of communication to these bases from Australia. Such naval and air forces were not available and such action (as the movement of large army garrisons to the North-Eastern approaches to protect advanced bases) would therefore only have resulted in the investment of the garrisons concerned and their defeat. . . . It would only have reduced the forces available for the final defence of vital areas of the mainland."

[8] F-O L. J. Sloan, 2622 (Lt RANR), 11 Sqn. Commercial pilot; of Bellevue Hill, NSW; b. Brisbane, 1 May 1912. Killed in action 8 Dec 1941.

[9] F-Lt N. P. Reid, 557. 23 and 11 Sqns. Regular air force offr; of Graceville, Qld; b. Brisbane, 25 Sep 1915. Killed in action 8 Dec 1941.

[1] The other crew members were Cpls N. L. Ernst and E. J. O'Donnell, LAC C. J. Matheson, AC1's G. R. Peterson, K. N. Sidey and A. W. Magee.

Insistence on making a stand against the enemy at Rabaul led to the transfer of No. 24 Squadron's Wirraways to that base. One flight left Townsville on 10th December for Horn Island in Torres Strait. On the next stage—300 miles to Port Moresby—they were escorted by a Catalina. From there the route lay through Lae to Gasmata and on to Rabaul. A small store of 100-octane fuel had been placed at Gasmata a year earlier but there were no proper refuelling facilities. For lack of adequate maps the pilots pinpointed Gasmata on an Admiralty chart and, led by their commanding officer, Wing Commander Lerew, they reached that base safely. Refuelling was laborious. A native "bucket line"—with tins taking the place of buckets—was organised so that the aircraft tanks could be filled from 44-gallon drums. The runway at Gasmata presented further difficulties; grassed at the seaward end, the remainder was paved with coral. Lerew led the way off to seaward over a high cliff, but as the other pilots followed him one Wirraway flown by Pilot Officer Lowe[a] dropped as it crossed the cliff edge and struck the sea, breaking its tail-wheel. In spite of this Lowe managed to pull up and become airborne and the flight of four aircraft reached Rabaul safely.

Thinking they would profit from Lowe's experience, the pilots of the second flight took off from Gasmata in the opposite direction, but their aircraft bogged on the grassy section of the runway and they were able to get off only with the aid of natives who, holding up each wing, ran with them until enough speed had been gained for take-off when, as the Wirraways left the ground, they sprawled good-naturedly in the mud. Eventually all the Wirraways arrived safely at Vunakanau airfield, Rabaul. Here the squadron found that little preparation had been made. Their aircraft had to be lined up along the runway in the most inviting way from the enemy's viewpoint. A galvanised-iron shelter served as workshop and hangar and the living quarters were native huts borrowed from the army. There was no provision for an operations room, equipment storage or for medical, armament, photographic or parachute sections. Messing facilities provided by the army as best they were able had little to commend them. Thus the squadron began an active war role about which its members could have few illusions, for enemy reconnaissance aircraft had already been active; one had been reported over Kavieng and Rabaul on 8th December and another over Rabaul again next day. This last aircraft, identified as a twin-engined naval bomber, made three runs over the area, suggesting that this was a photographic reconnaissance and perhaps the prelude to a full-scale attack.

The other crucial area within the Australian operational purview was in the north-west. Some progress had been made at the various Netherlands East Indies bases by the R.A.A.F. installation parties working with Dutch cooperation. At each of the three main bases, Koepang, Laha and

[a] F-O J. C. Lowe, 402662; 24 Sqn. Clerk; of Labassa, Fiji; b. Sydney, 6 Jul 1915. Killed in action 20 Jan 1942.

Namlea, about 100,000 gallons of aircraft fuel had been stored and practically all accommodation—for one squadron at each base—had been completed, but there were deficiencies in bombs and ammunition. Airfield construction was in progress at Liang (northern Ambon), Djailolo (Halmahera Islands), Babo (Dutch New Guinea), Atambua (Timor) and Saumlaki (Tanimbar Island).

On 7th December the crew of a flying-boat, in which Group Captain Scherger was flying from Ambon to Koepang, sighted the Japanese pearling mother ship *Nanyo Maru* steaming through Wetar Strait. Next day, in the knowledge that Australia was at war with Japan, the Hudsons were ordered to attack the enemy vessel. At dusk they found their target, bombed it accurately and so damaged it that it went aground and was abandoned by its crew.[4] This was "first blood" to No. 2 Squadron which, four days later, was completely established at Penfui with the commanding officer, Wing Commander Headlam,[5] serving also as base commander under A.C.H. Darwin.

The third flight of No. 13 Squadron and No. 2 Squadron's two remaining flights were in readiness to move to Namlea and Koepang respectively when required. The movement of the remaining ground staffs of the two squadrons was subject to the provision of transport. When Scherger was at Ambon he was disturbed to find that the supply service had failed; stocks of ammunition and fuel were quite inadequate, maintenance facilities were negligible, and dispersal for aircraft at Laha, for example, was very poor. "The facilities for operations at Laha, Namlea and Babo (Dutch New Guinea) were typical of any ill-equipped operational base," he wrote obliquely in his report. Equipment issued to the Hudson crews was insufficient and there were no spare engines for their aircraft, although spares and equipment had been ordered in September. Dutch air strength on Ambon consisted of three groups of Catalinas (9 aircraft in all), and a fighter patrol of four Brewster Buffaloes, two of which soon became unserviceable.

Orders for the first air strike by an Australian squadron in the Netherlands East Indies against an enemy land target were given on 10th December to No. 13 Squadron's two flights based at Laha—a bombing raid on Tobi Island, the westernmost point in the Japanese mandated area, about 170 miles east of Morotai Island in the Halmaheras. Photographic reconnaissance had indicated that the Japanese were developing the island as a submarine base and there was the added probability that the enemy might use it as a base for air attacks against Allied shipping. At 5.45 a.m. the six Hudsons took off. Almost immediately the leading aircraft, piloted by the squadron commander, Wing Commander McDonald, crashed into the sea. There were no survivors. Flight Lieutenant

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[4] The crew got ashore and made their way to Koepang where they were interned by the Dutch.

[5] Air Cmdre F. Headlam, CBE. Comd 2 Sqn 1941-42, Controller of Operations HQ North-Western Area 1942; comd 2 ANS 1942-43, 2 AOS 1943; SOA HQ North-Western Area 1945. Regular air force offr; of Hobart; b. Launceston, Tas, 15 Jul 1914.

Dunne[6] then led the other five Hudsons which flew on to the target and attacked with bombs and gunfire from about 800 feet. An adminstrative building and storehouses in the wharf area were damaged, the aircraft remaining over the target for about a quarter of an hour without any opposition. The unusual clarity of radio reception at the time was demonstrated when an involuntary exclamation by the captain of one Hudson, Flying Officer Ross,[7] who, as he watched his bombs go down, remarked, "That will fix them!" was clearly heard by the operators at the base at Halong. The attack revealed a lack of coordination in operational control that provided a sharp lesson; the Central War Room at Victoria Barracks, Melbourne, first learned of the operation when a signal was received reporting its results.

Squadron Leader Ryland,[8] then at Namlea where the squadron's three remaining Hudsons arrived on the day of the attack, now took command of No. 13 Squadron, which in the interim from Squadron Leader McDonald's death had been commanded by Squadron Leader Parker.[9] Two days later all the Hudson units in the area received instructions from the Central War Room that, as their striking power was so limited, their aircraft should not be used on long reconnaissance flights unless no other means of gaining information were available. About 11 a.m. on the same day (12th December) the operations room at Halong received a signal stating that seven tri-motored bombers were heading south and might be expected over Ambon in about 20 minutes. The attack was awaited but nothing happened and some hours later the Dutch headquarters apologetically explained that the report was false—a coastwatcher had misread his Dutch-English dictionary. No. 13 Squadron was now operating from three bases—Laha, Namlea and Darwin, where all aircraft inspection, engine changes and repairs of any consequence were undertaken.

On 17th December the A.I.F. force that had been assigned to Ambon disembarked. It consisted of the 2/21st Battalion and 213 men in other detachments. On the 12th the A.I.F. force assigned to Timor had arrived at Koepang. It included the 2/40th Battalion, the 2/2nd Independent Company and other supporting troops and totalled 1,400 officers and men.

While the operational units of the R.A.A.F. in the Australian and Netherlands East Indies were cutting their combat teeth, those in Malaya were already deep in the throes of a bitter defensive conflict. From Butterworth No. 21 Squadron was able to make but a small contribution

[6] W Cdr R. A. Dunne, DFC, 260420. 13 Sqn and 1 OTU (RAAF Special Transport Flight); comd 23 Sqn 1944-45. Commercial pilot; of Sydney; b. Warracknabeal, Vic, 10 Oct 1913.

[7] Sqn Ldr W. L. Ross, 260679. 13, 100 and 21 Sqns. Salesman; of Rose Bay, NSW; b. 12 Feb 1915.

[8] Gp Capt J. P. Ryland, CBE, DFC, 250188. Comd AOB Namlea 1941, 13 Sqn 1941-42; CFI 1 OTU (comd 1944); comd 79 Wing 1944-45. Commercial pilot; of Elsternwick, Vic; b. Melbourne, 26 Jul 1911.

[9] Gp Capt P. A. Parker, DFC, 153, 8, 7, 21 and 13 Sqns and HQ North-Eastern Area; comd 12 Sqn 1941, 100 and 30 Sqns 1942, 32 Sqn 1943, 13 Sqn 1943-44, 21 Sqn 1944-45, 85 Wing HQ 1945. Regular air force offr; of East Kew, Vic; b. London, Eng, 1 Jun 1916.

until it received replacement aircraft. Its limited role was mainly tactical reconnaissance. On one such sortie Flying Officer Sheppard[10] and Flying Officer Sproule took off at 10.40 a.m. on 9th December. When about 12 miles across the Thai border they observed a large block across the Jitra-Ban Sadao road and a sandbag barricade which they took to be a machine-gun emplacement. Still more significant was a group of between 12 and 15 tanks at Ban Sadao. As the Buffalo pilots dived to attack the tanks they saw a Japanese soldier standing near them waving a flag, but they were unable to find any explanation for this and there was no anti-aircraft fire, nor did they encounter any enemy aircraft. Near Jitra they found an enemy motor transport column which they also attacked leaving four trucks blazing and several others damaged.

Singora, from which increasingly powerful enemy air strikes were now being mounted—as the fate of Alor Star and Sungei Patani indicated—was an obvious target for the R.A.F. bombers. As General Percival wrote later, it was "a wonderful target had we had an adequate and balanced air striking force". Though adequacy and balance were just what it lacked, R.A.F. Command did strive to strike the enemy here. Two attacks were planned for 9th December. One was made by six Blenheims of No. 34 Squadron; they met heavy fighter opposition and three of the Blenheims were shot down. There was no clear observation of the result of their bombing but the crews that did return claimed that, at least, they had scored hits on a congested airfield. The other attack, which was to be made by all available Blenheims of Nos. 34 and 62 Squadrons from Butterworth, was never made—at least, not as planned. Just before the time for take-off, Japanese bombers caught all the Blenheims but one on the ground with disastrous results. The pilot who succeeded in taking off, Squadron Leader Scarf[11] of No. 62 Squadron, circled the airfield until it was obvious that none of his comrades was airborne. He then turned north determined on a lone strike on Singora. The Blenheim was subjected to repeated enemy fighter attacks and concentrated anti-aircraft fire, yet Scarf held to his course and loosed his bombs on the target. In the action he was severely wounded, but he retained control of the bomber, now damaged by enemy fire and, choosing the shorter route to Alor Star, made a crash landing there without injury to his crew. In hospital that evening Scarf died.[1]

After these costly operations Air Headquarters ruled that daylight bombing of land targets must cease until fighter escort could be provided. Actually No. 21 Squadron did attempt to provide some cover for the Blenheims that day. At the urgent order of Norgroup Headquarters, four

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[10] Sqn Ldr G. M. Sheppard, 280628. 21, 4 Sqns; 73 and 72 Wings; and RAAF Cd. Clerk; of St Peters, SA; b. St Peters, 28 Dec 1914.

[11] Sqn Ldr A. S. K. Scarf, VC, 37693, RAF. 62 Sqn RAF. Regular air force offr; of Wimbledon, Eng; b. Wimbledon, 14 Jun 1913. Died of wounds 9 Dec 1941.

[1] Though his gallantry was not formally acknowledged until long afterwards it won for him the posthumous award of the Victoria Cross.

Buffaloes flown by Flight Lieutenants McKenny,[2] Williams and White[3] and Flying Officer Montefiore[4] were directed to rendezvous with Blenheims assigned to attack Singora. The aircraft were airborne for about two hours but the rendezvous was not made because of bad weather and they returned to Butterworth about 5 p.m.

Williams and McKenny had just landed when 27 Japanese dive bombers and 27 fighters were seen. The two Buffaloes climbed straight for the enemy formation which moved unwavering through the somewhat limited anti-aircraft barrage until first one bomber and then a second broke out and turned seaward leaving trails of black smoke. But the bombs fell squarely on the airfield. Williams and McKenny continued to climb until several Zeros broke away and dived on them, the leader firing on McKenny who replied with his own guns until his aircraft burst into flames and he was forced to bale out and parachute into the sea between Butterworth and Penang. Williams was attacked by 3 enemy fighters. With his guns jamming he had no choice but to dive away, drawing his attackers through the anti-aircraft fire as he did so. After making one attempt to land and being forced by the speed of his approach to "go round again", he succeeded in landing and leaped from the cockpit into a trench as his pursuers swept the runway with their gunfire. Flying Officer Montefiore, after firing at a Zero which later was claimed as destroyed, also baled out when his aircraft was shot down. He landed unhurt in a palm tree and, "borrowing" a native's bicycle, made his way back to the squadron. The fourth Buffalo pilot, Flight Lieutenant White, fought until his aircraft was riddled by enemy bullets and then made a forced landing on Penang Island. Unhurt, he too made his way back to Butterworth. McKenny had come down in the sea with his face severely burned. He managed to reach and cling to a native fish trap from which he was rescued by an elderly English naval officer who put off from the island in a launch.

Butterworth station had been severely damaged, chiefly by fire, and the explosion of delayed-action bombs added to the confusion. That evening the Norgroup commander, Wing Commander Forbes, whose headquarters had been moved to Bukit Mertajam, near Butterworth, ordered the withdrawal of No. 21 Squadron to Ipoh. No. 62 Bomber Squadron moved to Taiping and only No. 27 Squadron, which now had no aircraft serviceable, remained. In the meantime the servicing party of No. 21 Squadron, which had been left at Sungei Patani, on being told by men of the 11th Indian Division that the enemy was approaching and they should evacuate the airfield, withdrew to Butterworth. Unserviceable aircraft that were capable of flight were sent to Singapore for repair. The ground staffs of these units had endured much and their confidence had been shaken by what Air Vice-Marshal Maltby later described as

[2] Sqn Ldr C. R. McKenny, 574. 21, 21/453 Sqns, 2 FSHQ, 86 and 80 Sqns. Regular air force offr; of Neutral Bay, NSW; b. Sydney, 30 Apr 1918. Killed in action 13 May 1944.

[3] F-Lt A. M. White, 573; 21 Sqn. Regular air force offr; of Stirling, SA; b. Parkes, NSW, 9 Mar 1916. Killed in action 14 Dec 1941.

[4] Sqn Ldr H. V. Montefiore, 290629. 21, 21/453, 77, 25 and 85 Sqns, 6 FSHQ, 11 FSH. Salesman; of Mt Lawley, WA; b. Perth, WA, 20 Feb 1915.

"the opportuneness of the enemy's attacks and pernicious rumours of disasters in the land fighting".

There was no senior officer at Butterworth with sufficient weight to take control (he wrote in his despatch) and some of the personnel of No. 21 (F) Squadron R.A.A.F. and No. 27 (NF) Squadron R.A.F., both of which had already been driven out of Sungei Patani, did not behave at all steadily. Other units, however, maintained their order.[5]

No. 21 Squadron's few serviceable Buffaloes were flown first to Penang where, in the dusk, despite lowered undercarriages and navigation lights, they were mistaken for enemy aircraft and were fired on (without damage) by Penang's pathetically weak anti-aircraft batteries—a few machine-guns. Next day (10th December) they flew to Ipoh. Meanwhile the remainder of the unit moved by road and rail, arriving at their new base at 3.30 a.m. and camping by the roadside because no quarters could be found for them at the time.

As though to emphasise the impotence of the British air forces, Penang was subjected to a severe air attack on the day that Butterworth was left without any operational aircraft. Georgetown, the main centre of population, was blasted by more than 40 bombers escorted by a large number of fighters. The townspeople, to whom this was a new experience, thronged the streets and many were hit as, too late, they tried to flee to shelter in the hills, while the gallant and under-staffed civil defence and medical services strove to remove the dead and dying from the streets. Flying Officer Hood, who with White, visited the island next day in a vain attempt to recover White's Buffalo, which he had crash-landed there in the Butterworth battle, wrote later that they had seen dead civilians still lying in the streets. The telephone exchange, fire brigade and many other public buildings had suffered severely. On the roads there was a line of "pitiful natives trudging into the bush. . . . The hospital was doing a marathon job in taking care of casualties but (the staff) were afraid that the place would be bombed. . . . Penang had fallen by the wayside without (in effect) a shot being fired in its defence."

The island, which had considerable military importance because of its port facilities, its use as a depot for ammunition and stores, and the fact that it was the departure point for two overseas cables, was now under grave threat. General Percival's plan had been that, if his troops on the mainland were forced back, they should retire on the axis of the west coast communications and that the Penang garrison should be strengthened in an endeavour to withstand the enemy's pressure. That plan was no longer practicable. Every fighting man was needed on the mainland to avoid the threat to the airfields in central Malaya and sheer military necessity now dictated that Penang must be abandoned. On 15th December the commander of the island's garrison was ordered to complete evacuation by the night of 16th-17th December.

[5] Maltby Despatch, para 222. This section of the despatch deals with an episode which occurred before Maltby took up duty with AHQ, which was on 12th January 1942.

At Ipoh, to which Norgroup Headquarters had also moved by this time, the situation was far from encouraging. Squadron Leader Allshorn records a "very strained" conversation he had with Wing Commander Forbes who ordered him to re-form his squadron. When Allshorn asked for 12 replacement aircraft to enable him to do this he was told that it would be some days before these could be made available. But Air Headquarters acted promptly and issued orders that the squadron was to receive 16 Buffaloes "immediately" and a proportion of new pilots. That night a group of the unit's pilots, led by Allshorn, left by train for Singapore to bring back these aircraft. There was little in the way of airfield defences at Ipoh but all who could man a machine-gun were given posts at which they waited in expectation of an enemy raid. For food the squadron was referred to an army unit about eight miles away. Here the rations available were quite inadequate and drinking water was particularly precious because, it was reported, all the streams had been contaminated. From its own limited strength the squadron, temporarily under the command of Williams, had to form a station administration. Ground staff trained for technical duties had thus to serve as cooks, messmen, transport drivers and guards. There were no facilities for maintenance but—an anti-climax for a fighter squadron almost without aircraft—the dispersal facilities were excellent: good aircraft pens dispersed over a large area and well camouflaged. These dispiriting circumstances were made worse by the fact that here relations between the R.A.A.F. and R.A.F. were not happy. Hood of No. 21 wrote later:

> We found the R.A.F. very hostile because we had left them to it the night before. The fact remained that they were unable to do anything and had no hope of replacements. . . . No one seemed to know what to do . . . and the logical reasoning of our C.O. . . . was that we, at least, would get a place where we could stand and fight back with a reasonable chance of being successful. . . .

On the eastern side of the peninsula circumstances were no less depressing. When the air force convoy from Kota Bharu was moving south by train Wing Commander Davis obtained permission from Air Headquarters by telephone to detach a party of 67 airmen at Jerantut and move them by road transport to Kuantan in the hope that they would be able to assist in operations from that base. When only a few miles from their destination, Davis and his party met another air force party which included R.A.A.F. ground staff travelling in the opposite direction in a variety of vehicles. These men reported that Kuantan also was being evacuated.

As Davis had guessed from this meeting the situation at Kuantan was very discouraging. Though the airfield had not been under attack during the night of 8th December the ground staff had been working under extremely difficult conditions. Flight Lieutenant Bulcock, who was responsible for the preparation of all serviceable aircraft for further operations, wrote later:

The airfield was absolutely pitch dark and orders had been issued not to show a light. The rain still fell in heavy showers and [some of] the aircraft, scattered hundreds of yards apart, simply could not be found. Then one of the old tanker-towing tractors broke down and it was necessary to load lorries with drums and use a hand pump, a slow and exhausting business. In a few minutes the lorries were immovably bogged; one tractor had to do the whole job; scouting parties couldn't find their way back to the tractor, or didn't want to. . . . And we were a front-line operational station![6]

Next morning Air Headquarters, anxious about the concentration of aircraft at Kuantan, ordered that all but 12 Vildebeestes and the 13 Hudsons of the two Australian squadrons should return at once to Singapore. In the early part of the day 3 Hudsons from No. 8 Squadron made a parallel track search to seaward but within sight of the coast. One pilot, Flight Lieutenant Arnold, reported a convoy which he listed as 2 cruisers, 7 destroyers and 3 transports. Preparations for action against these ships were prevented by a surprise attack by nine Japanese Navy Type-96 bombers which attacked the airfield from 5,000 feet. There was an interlude when a Hudson crew with Flight Lieutenant Widmer[7] as captain made a plucky attack on an enemy bomber that came within range of their guns. The enemy aircraft was believed to have been destroyed and the unusual incident of a Hudson turned interceptor interrupted the Japanese bombing run. But the attackers completed their bombing and later swept the airfield with gunfire that was "even worse than the bombing". Three aircraft were destroyed on the ground and some damage was done to buildings, stores and equipment. Except for one minor wound there were no casualties. There were only a few Thompson sub-machine-guns and rifles on the station for defence and, since there was no fighter cover (the valiant effort of Widmer and his crew could scarcely come within that category) and no anti-aircraft artillery, the enemy aircraft were able to do much as they pleased. The bomb-fusing store, armoury, station workshop and equipment store were destroyed along with the bulk of the squadron's supplies, which had been unloaded only the day before from the ship which had brought most of the ground staff from Singapore. However, petrol, oil, bombs and torpedoes sufficient for offensive operations for several weeks remained untouched.

Soon after receiving the news that Kota Bharu had been evacuated Squadron Leader Henderson sent a signal to Air Headquarters suggesting that in the light of this happening and since his squadron had fulfilled its reconnaissance role, it should move to a base where it would be under air defence. Not long after this signal had been sent and before a reply could be received from Air Headquarters—a reply which, in fact, instructed him peremptorily to stay where he was as the bombing of Kuantan "was not in the scheme of things"—the enemy aircraft made their attack. A report of this raid was sent to Air Headquarters by secret telephone.

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[6] Bulcock, *Of Death But Once*, p. 38.

[7] Sqn Ldr R. Widmer, DFC, 559. 21, 8 and 14 Sqns; 10 Gp and 1st TAF. Sheep station overseer; of Camperdown, Vic; b. Ultima, Vic, 12 Mar 1916.

Confusion followed the reply which was interpreted by some as meaning that all airworthy aircraft with their crews were to be flown to Singapore, and by others that Kuantan was to be evacuated entirely. Henderson understood that the aircraft were to leave, and while he was preparing for their departure the evacuation rumour spread so rapidly that most of the squadron and station headquarters ground staff appropriated what transport they could find and set off in disorder along the road to Jerantut, 102 miles away.[8] About 4 p.m. the 7 airworthy Hudsons took off with the remaining members of No. 8 Squadron, and flew to Sembawang. The station commander, Wing Commander Councell,[9] disturbed by what appeared to him the unduly alarming report of the attack sent to Air Headquarters, gave an assurance that it had been greatly exaggerated. Bulcock, who remained on the station, wrote later:

> In half an hour that little flame of panic had spread like wild-fire. I looked out on a deserted station. . . . There were only four of us left—the C.O., the Adjutant, the Armament Officer and myself . . . myself still too numb to appreciate the sarcasm of the other men's conversation. Then I realised they were talking of Australians, that I was an Australian, and that many curious glances were being cast in my direction. . . . For the first and last time I felt ashamed of being an Australian. . . . The next day twenty-three men returned in a couple of trucks and a party of them was put on to salvaging as much kit as possible from the airmen's barracks. By this time it seemed fairly definite that A.H.Q. had given up all hope of using the station again, for orders had come through to save what we could and get out as soon as possible. It seemed absolutely incredible to us that such action was necessary.[1]

Since the party from Kuantan which Wing Commander Davis had met had no officer in charge of it he took control and, with his own party, returned to the railway and entrained them for Singapore. At Sembawang Davis found that four Hudsons of his own squadron had arrived safely; the fifth had been destroyed by the enemy.

In the first hours of 8th December, when news of the approach of enemy aircraft towards Singapore was received, No. 453 Squadron at Sembawang was at the alert. Flight Lieutenant Vigors, a young Irish

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[8] It was these airmen who had been intercepted by W Cdr Davis on his way to Kuantan from Jerantut.

[9] W Cdr R. B. Councell, 26049, RAF. 205 Sqn RAF; comd RAF Stn Kuantan 1941, 205 Sqn 1941-42, 7 AFU 1943-44, 55 RU and 102 PDC 1944-45. Regular air force offr; b. Walworth, Eng, 7 Sep 1908.

[1] Bulcock, pp. 41-4. The evacuation from Kuantan and other airfields in northern Malaya was later the subject of a court specially convened on the order of AVM Pulford by Gp Capt McCauley, soon after that officer's return to Singapore from the Middle East. The court comprised McCauley (president), Gp Capt C. K. J. Coggle, RAF, and F-Lt G. H. Mocatta, RAAF. (Mocatta, the Station Intelligence Officer at Sembawang, was in private life a barrister and solicitor.) Six copies were made of the court's report. Four were sent to AHQ at Sime Road, Singapore, the fifth to Gp Capt Coggle and the sixth was retained in RAAF files. All six copies were subsequently lost or destroyed because of enemy action. In 1946, at the request of the Air Ministry, McCauley, with the assistance of Mocatta who had by this time returned to civil life, compiled a report of the inquiry and its findings from such relevant documents as had been preserved and from his best recollection. This report has been relied upon largely for the account of the evacuation given here. The court found that as Henderson was engaged in arranging the evacuation of all airworthy aircraft he had not had either the time or the opportunity to control the ground staff and apparently no other officer had taken control of them. It also found that the order from Air Headquarters concerning the evacuation was either confused or confusing; that the station commander had not prepared any plan for defence or for an emergency movement from his station and had failed to take charge of the evacuation; and that the evacuation of ground staff had been disorderly and uncontrolled.

Battle of Britain pilot, who was temporarily in command of the squadron, and two equally enthusiastic Australian flying officers, Vanderfield[2] and Grace,[3] who had also been in combat over Britain and in the Middle East, sought permission to take off to intercept. Their request was refused and when Vigors suggested that they might take off "anyway" he was told that if they did they would be placed on a charge for disobedience of orders. Dismayed at this order, which to them was inexplicable, these three eager and experienced pilots stood helplessly watching the enemy bombers drone across Singapore Island in clear moonlight. Though, with their fellow pilots, they remained ready for action there was no call on them in the first two days of war. As already noted, No. 453 Squadron had been given, nominally at least, the responsibility for providing air cover for the Eastern Fleet then lying in Singapore Harbour—the battleship *Prince of Wales,* the battle cruiser *Repulse,* 3 cruisers, and 11 destroyers (including H.M.A.S's *Vampire* and *Vendetta*). These ships represented a considerable naval force then lying within striking range of the enemy's invasion operations. This fact was very clearly in the mind of the fleet's commander. Admiral Phillips had just returned from Manila where he had been conferring with the Commander-in-Chief of the United States Asiatic Fleet, Admiral Hart. On learning of the invasion he asked Air Headquarters whether air support could be provided in these terms:

(1) Reconnaissance 100 miles to the north of the force from daylight, 9th December.
(2) Reconnaissance to Singora and beyond, 10 miles from the coast, starting at first light on 10th December.
(3) Fighter protection off Singora at daylight on 10th December.

Air Vice-Marshal Pulford, apparently most reluctant to admit that he could not provide for needs so obviously vital, replied tentatively that he could grant the first request, hoped that he could provide the second, but had great doubt whether he could give fighter protection off Singora. Late in the afternoon of 8th December Phillips put to sea in *Prince of Wales* with Captain Leach[4] as his flag captain, accompanied by *Repulse* (commanded by Captain Tennant[5]) and a screen of four destroyers, including H.M.A.S. *Vampire.* Pulford's definite reply was to follow by signal, but though he had deferred his decision he could not improve on his tentative reply. That evening Phillips received the confirming signal which expressly stated that no fighter protection could be provided off

[2] Sqn Ldr R. D. Vanderfield, DFC, 402068. 258 Sqn RAF, 453, 76 and 79 Sqns; comd 110 MFCU 1944-45. Commercial traveller; of Enfield, NSW; b. Sydney, 25 Nov 1914.

[3] Sqn Ldr B. A. Grace, DFC, 402053. 258 Sqn RAF, 453 and 76 Sqns; SO Training 9 Gp 1942-43; comd 82 Sqn 1944-45. Company director; of Sydney; b. Sydney, 29 Apr 1912.

[4] Capt J. C. Leach, DSO, MVO; RN. (1914-18: HMS *Erin.*) Director of Naval Ordnance, Admiralty, 1941; comd HMS *Prince of Wales* and Flag Officer to C-in-C Eastern Fleet 1941. Lost in sinking of *Prince of Wales* 10 Dec 1941.

[5] Admiral Sir William Tennant, KCB, CBE, MVO; RN. Comd HMS *Repulse* 1940-41; Flag Officer Levant and Eastern Mediterranean 1944-46; C-in-C America and West Indies Stn 1946-49. B. 2 Jan 1890.

Singora on the 10th.[6] The first request by Phillips was met.[7] Compliance with the second, which would have to be undertaken by Blenheim IV's from Kuantan, was dependent on whether that base could be held long enough against the increasing pressure of the Japanese forces. Fighter protection off Singora was out of the question because all the northern airfields were now either untenable or too severely damaged to be used and the range of the Buffalo fighters was too short and their number too few to provide adequate air cover from any base farther south.[8]

Apparently determined that the striking power of his ships must be used at this critical time, despite the known hazards, Phillips took his squadron northward by a divergent course on which he hoped to avoid detection by enemy reconnaissance aircraft. He planned to arrive off the coast of Thailand between Patani and Singora at dawn on Wednesday the 10th. While the ships were steaming northward the admiral signalled to the captain of *Repulse* instructing him to inform his ship's company of the enemy's progress on land and in the air and that Japanese transports were lying off the coast.

> This is your opportunity before the enemy can establish himself. We have made a wide circuit to avoid air reconnaissance and hope to surprise the enemy shortly after sunrise tomorrow, Wednesday. . . . We are sure to get some useful practice with high-angle armament, but wherever we meet I want to finish quickly and so get well clear to the eastward before the Japanese can mass too formidable a scale of air attack against us. So shoot to sink.[9]

But, late in the afternoon of the 9th, three enemy reconnaissance aircraft were sighted. They remained well out of gun range and shadowed the British ships until nightfall. Phillips thereupon decided to abandon the Singora operation, reasoning that, with foreknowledge of the presence of his squadron, the enemy convoy would have dispersed by the time his force could arrive and that, most probably, enemy aircraft would be waiting for him instead. At 8.40 p.m., therefore, he turned his ships about and steamed for Singapore. Earlier the destroyer *Tenedos* had been detached from the squadron to return to Singapore because her fuel supply was low. Her captain was instructed to signal to Singapore next morning that the squadron would return early. About 11 p.m. the admiral received a report from his chief of staff in Singapore, Rear-Admiral Palliser,[1] stating that the Japanese land forces had made further advances and that the R.A.F. had been forced to evacuate still more airfields in the north. The message added that Air Chief Marshal Brooke-Popham was contemplating the diversion of all air operations to the defence of Singapore.

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[6] The words "off Singora" did not appear in the text of the signal but were implied in the light of Admiral Phillips' request.—Maltby Despatch, para 212.

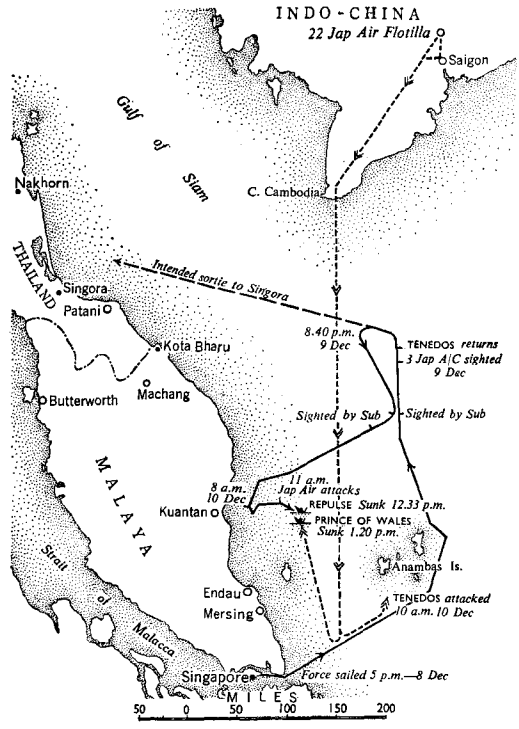
[7] The reconnaissance sorties agreed to were carried out on 9th and 10th December, but one of the Blenheims on the Singora patrol on the 10th had trouble with faulty wireless transmission.

[8] Unlike the Japanese, the RAF Command had not introduced the detachable auxiliary fuel tank on their fighters.

[9] Quoted by O. D. Gallagher, in *Retreat in the East* (1942), pp. 40-1.

[1] Admiral Sir Arthur Palliser, KCB, DSC; RN. Comd HMS's *Excellent* 1938-40, *Malaya* 1940-41; Chief of Staff to C-in-C Eastern Fleet 1941-42; comd 1 Cruiser Sqn 1943-44; Chief of Supplies and Transport, Admiralty, 1944-46; C-in-C East Indies Stn 1946-48. B. 1891. Died ?? Feb 1956.

Early next morning Phillips received a further signal stating that the enemy was making a landing 140 miles north of Singapore, near Kuantan.[2] He steamed to investigate, reaching the estimated position of the invasion force at 8 a.m., but found no sign of any enemy convoy or escort. The squadron therefore continued southward along the coast until 9.30 a.m. when it turned north-east to investigate small craft sighted earlier. Shortly before 10 a.m. the flagship received a signal from H.M.S. *Tenedos,* then about 140 miles to the south, reporting that she had been sighted by enemy aircraft, and soon afterwards another message stating that the destroyer was being bombed. Twenty minutes later a Japanese aircraft was sighted from the flagship. An anxious hour passed and then nine enemy bombers flying in orthodox formation were seen bearing towards the British ships. Selecting *Repulse* as their first target, they began attacking through a barrage of anti-aircraft fire. The bombing was accurate but it achieved only one direct hit—on *Repulse*—and that without causing much damage. A lull followed and then the true weight of the attack became apparent—torpedo bombers swept in on both capital ships at low altitude. Watchers in *Repulse* saw a mass of water and smoke rise from *Prince of Wales* aft and on the port side, apparently the result of a torpedo explosion, perhaps two simultaneously. With her speed much reduced and her steering erratic and a list to port, it was clear that the flagship had received a crippling blow. Some enemy aircraft went down in flames in the face of the blast from the warships' guns but the attack had not ended. In *Repulse,* Tennant, puzzled by the absence of any signal from the flagship that might bring fighter protection from Singapore, decided, at 11.50 a.m., to send one himself. As he did so another high-level bombing attack began but the enemy failed to gain any direct hits. *Prince of Wales* was now flying the "not under control" signal and



[2] Early on the night of 9th December beach defence posts reported hostile ships closing on the Kuantan coast. Artillery fire was opened along the sector but no landing was made; an attempted landing was frustrated or the enemy had made a feint. Percival, *The War in Malaya,* p. 129.

Tennant began closing his ship on her in the hope of giving some aid. Minutes later, another torpedo attack began. Tennant manoeuvred his ship to "comb" the torpedoes as they approached from the starboard bow but part of the enemy formation broke out and turned in on the port side leaving little or no chance for evasion.[3] The Japanese tactic succeeded and the battle cruiser received a torpedo amidships on the port side. Once again it was the flagship which suffered most; three, possibly four more torpedoes hit her. Now *Repulse* received another hit aft, which jammed her steering and then three more hits in succession. A list developed rapidly and then "the loud-speakers spoke for the last time: 'All hands on deck! Prepare to abandon ship. God be with you! . . .' It was 12.25 p.m."[4] About ten minutes passed and then the battle cruiser turned over and sank. *Prince of Wales,* down by the stern and drifting, was now subjected to another bombing attack. Only one bomb hit her and it did small damage. At 12.50 p.m., Phillips sent a signal to Singapore asking that tugs be sent to meet his ship but very soon she was beyond all aid. Half an hour later she followed her consort to the bottom of the South China Sea. The crews of the three destroyers gave magnificent service in the rescue operations that followed. More than 2,000 lives were saved including that of Tennant who was picked up by the *Vampire.* Phillips and Leach went down with their ship. Of the complement of the *Prince of Wales* 327 officers and men were lost and of that of *Repulse* 513.

In the Combined Operations Room at Singapore the first news from *Prince of Wales* on 10th December was a signal (presumably that sent from *Tenedos*) received early in the morning, indicating that the warships might return sooner than was originally planned. Throughout the rest of the morning no word came from the squadron whose position was not then known. About midday a signal originating from *Repulse* stated simply that the two capital ships were under enemy air attack in a position about 60 miles east from Kuantan. Eleven aircraft of No. 453 Squadron were standing by specifically prepared to give air cover to these ships should they be known to be returning to Singapore. Six minutes later these fighters took off for the scene of the attack 165 miles away. The customary briefing of the pilots had been omitted; the squadron had been "scrambled" and when the pilots were airborne they were instructed by radio-telephone to patrol a specific area where they would find their objective. The details were too secret to be communicated over the air. They arrived only in time to witness the rescue operations of the destroyers. Two aircraft presumed to be Japanese were seen flying northward but at too great a distance for interception.

While the battle was being fought those at the Kuantan airfield heard heavy firing and explosions, but it was not until that night, when they

[3] To "comb" a torpedo attack is to turn the ship head on to the attackers and steer between the visible courses of the torpedoes. The Japanese released their torpedoes at a range of between 1,000 and 2,000 yards and from heights stated to be up to 300 feet. The 18-inch and 21-inch torpedoes used in the attack left a readily visible track. One torpedo recovered had a tail fitting or "drogue" to prevent it from diving to too great a depth.

[4] Gallagher, p. 51.

learned that *Prince of Wales* and *Repulse* had been sunk "right on our very doorstep", that they realised their significance.

Air Vice-Marshal Maltby observed (in retrospect) that had Admiral Phillips notified Air Headquarters of his change of plan—his decision to close on Kuantan in the hope of engaging an enemy invasion force there—it was conceivable that No. 453 Squadron might have moved to Kuantan. It is recorded that Air Vice-Marshal Pulford, on meeting Captain Tennant on his return to Singapore, was greatly distressed and exclaimed, "My God, I hope you don't blame me for this. I had no idea where you were."[5] While this evidence points to the failure of Phillips to inform Singapore of his whereabouts or that his ships were under air attack as the main explanation for the entire absence of fighter cover when it might have been provided, there is evidence in plenty to show that Phillips may well have believed that such help was out of the question. On the question of why he did not call for aid beforehand, there was the risk he would take in breaking wireless silence by signalling that his ships had been sighted by enemy aircraft.

A Japanese account of the battle credits submarines and not aircraft with the detection of the British ships.[6] Headquarters of *22nd Air Flotilla* at Saigon received a message at 4 p.m. on 9th December from a submarine which reported them as steaming northward, the position being given (incorrectly) as 7 degrees north, 105 degrees east. Aircraft being bombed-up for a raid on Singapore were hurriedly rearmed with torpedoes and at dusk took off for a night attack. Bad weather and probably the inaccuracy of the position report foiled them and they returned to base. At 3.15 a.m. on the 10th another submarine reported the British squadron steaming south. Ten bombers took off at 6 a.m. on a sector search and an hour later 88 aircraft—27 bombers and 61 torpedo aircraft—also took off. It was not until shortly before 11 a.m. that fortune turned sharply against the British force; one of the aircraft on the sector search, now homeward bound, sighted them and its signals brought the striking group in to attack. In all 9 bombers and 37 torpedo aircraft attacked *Repulse,* claiming one or two direct bomb hits and about twelve torpedo hits. *Prince of Wales* was attacked by 18 bombers and 24 torpedo aircraft and received probably only one bomb but ten torpedoes. After the attack one aircraft remained to observe the result and when 10 British Buffalo fighters were sighted it took cover and evaded them. Japanese fighters reached the scene of the battle too late to take part. On return to Saigon the striking force was rearmed for a second strike, but before they took off again news that both British capital ships had sunk was received. Four Japanese bombers were lost, three of them from one group which attacked from greater altitude than the other groups.[7]

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[5] Grenfell, *Main Fleet to Singapore,* p. 128.

[6] US Strategic Bombing Survey, *Interrogation of Japanese Officials,* Vol II, p. 333, Capt Kameo Sonokawa. Capt Sonokawa was flight leader, Genzan Group, *22nd Air Flotilla.* There is no doubt that reconnaissance aircraft did detect and shadow the British ships. Probably these were army aircraft and apparently their signals were forestalled by the submarine reports. The news of the approach of the British warships was signalled to the convoy lying off Singora and the transports put to sea at sunset, dispersing to the north until advised that danger of attack had passed.—*XXV Army* Operations in Malaya, November 1941-March 1942. (Japanese Studies in World War II, No. 85, Hist. Div. US Army.)

[7] Capt Sonokawa told interrogating officers that tests had shown that 10 per cent of torpedoes would run truly when dropped from 650 feet and 50 per cent truly when dropped from 325 feet. Consequently in training an effort was made to drop at from 65 to 165 feet, the low altitude giving the additional advantage of protection because of the depressing limit of the anti-aircraft guns of the ships being attacked.

The Japanese had now not only successfully landed a strong invasion force and driven the opposing air force from northern Malaya, but had eliminated the two most formidable units of Britain's Eastern Fleet. And all this had happened within three days. It was against this dark background that the Far Eastern War Council was formed in Singapore on 10th December with Mr Duff Cooper as chairman.[8] Before it the new council had a military challenge that could scarcely have been more threatening.

On the morning of the 9th, the four promised Dutch squadrons had reached Singapore—three bomber units with a total of 22 Glenn Martin bombers and one fighter squadron with 9 Buffaloes. But it was reinforcement with a qualification—the Dutch bomber crews had not been trained for night flying. One squadron of 9 aircraft was therefore sent back to the Netherlands East Indies for the needed training, and the other squadrons were to be sent back in succession. This was made more necessary because the Glenn Martins were slower than the R.A.F. Blenheims and had no better protective armament.

There were now no aircraft of R.A.F. Command based in north-eastern Malaya, Kuantan remaining as an advanced landing ground for refuelling only. By nightfall on 9th December it was estimated that, from its initially inadequate strength, the command had already lost aircraft equivalent to three bomber squadrons and one fighter squadron or approximately a quarter of the total number of operational aircraft in service 48 hours earlier. Air Headquarters later computed that on 8th, 9th and 10th December the Japanese had used a daily average of more than 120 aircraft in northern Malaya and estimated that more than 100 aircraft were based in the Singora-Patani area and at least 280 in Indo-China.[9]

In spite of the considerable hazards Qantas Empire Airways crews were continuing to operate their flying-boats on the shuttle service between Singapore and Karachi on behalf of British Overseas Airways Corporation. On occasions these crews undertook specifically military operations as when the flying-boat *Corsair,* commanded by Captain R. B. Tapp, carried a full load of aircraft fuel from Singapore to Sabang Island, off the northmost tip of Sumatra, a flight on which the aircraft exhausted even the contents of the 100-gallon auxiliary fuel tank with which it had been fitted, and the crew had to broach the cargo so that they could reach their destination. The Qantas crews quickly learned that the Japanese observed a fairly regular time-table for their air attacks on the ports through which the flying-boats staged, and thus it was generally possible to avoid these raids.

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[8] Composition of the council was: Mr Duff Cooper, the Governor and High Commissioner of Malaya, Sir Shenton Thomas, C-in-C Far East, C-in-C Eastern Fleet, GOC Malaya, AOC Far East, Australian representative, V. G. Bowden, and (later) Sir George Sansom, a Foreign Office expert on Japan, with a regular army major as secretary and staff officer to the chairman. Maj-Gen H. G. Bennett, commanding the AIF in Malaya, had the right to attend.

[9] Types identified were the Navy Zero fighter, the Navy 96 and Army 97 twin-engined bombers and the Junkers 87N (Japanese version) dive bomber.

By 11th December the enemy air forces, having gained superiority in the air over northern Malaya, began to attack the defending land forces. One more attempt was made to strike the Japanese aircraft on the ground at Singora. At dawn on 12th December eight Blenheim bombers of No. 34 Squadron set out from Tengah. Few of them reached the target because of extremely bad weather which itself accounted for the loss of several aircraft. This vain attempt illustrated a point which later became a matter for contention between Air Headquarters and General Percival's command.

Air Headquarters took the view that the raid had been made to meet the demands of Malaya Command so that the ground forces should have all protection possible from enemy air attack. The Air Staff held that the correct employment of their forces at this stage was in attacks on shipping and troop concentrations in the Singora area where Japanese reinforcements were still arriving rather than in cooperation with the army to delay the enemy's advance. G.H.Q. on 12th December issued a War Instruction which ordered that "for the present, assistance to the 11th Indian Division is to take precedence over other R.A.F. offensive tasks".[1]

For tactical reconnaissance these army forces had to rely chiefly on the two or three Buffaloes of No. 21 Squadron at Ipoh. Pulford therefore decided that No. 453 Squadron should move from Singapore to that base, the intention being that it should return when No. 21 Squadron had been re-equipped. The ground staff of No. 453 therefore remained at Sembawang when their unit's 16 Buffaloes took off early on 13th December in four flights—two of three aircraft each and two of five each. One flight of three—Wing Commander Neale,[2] who was to take command at Ipoh, and Pilot Officers Brown[3] and Livesey[4]—lost their direction in very bad weather. In attempting a forced landing Livesey mistook a paddy field for a crop growing on firm ground. His aircraft overturned several times but he escaped unhurt. Neale was killed when his aircraft struck a tree on its landing approach and burst into flames and Brown was also killed when his aircraft crashed and burned. The other pilots flew to Ipoh by way of Butterworth where one flight—Vanderfield, Ser-

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[1] AVM Maltby in his despatch (paras 235-36) states: "The GOC was approached again at about this time but reiterated that 'bomber policy must give immediate relief to his troops' which, in his view, could only be achieved by bombing aerodromes." The despatch here incorporates a note by General Percival in which he states that he had no recollection of this approach and asserts that there was no strong difference of opinion on the subject between AVM Pulford and himself. Since up to that time there had been practically no air attacks on the ground troops, it was very unlikely that he (Percival) should press for immediate relief for his troops. As long as the enemy air forces held control over northern Malaya the chances of the RAF doing damage to Japanese shipping and troop concentrations were remote. The only chance the RAF had of regaining some control was by destroying enemy fighters on their "weakly defended" airfields. If he had at that time pressed for an attack on Singora airfield it would have been for that reason. Maj-Gen Bennett, in a letter to Australian Army Headquarters dated 13th December 1941, wrote: ". . . There is insufficient cover in the air to enable the Army to carry out its role without molestation from the enemy's air force. I fear a repetition of Crete." H. G. Bennett, *Why Singapore Fell* (1944), p. 69.

[2] W Cdr L. J. Neale, 29174, RAF. 13 Gp and ASO (Operations) HQ Fighter Cd 1940-41; comd RAF Stn Sungei Patani 1941. Regular air force offr; of Congleton, Cheshire, Eng; b. Bootle, Cumberland, Eng, 3 Mar 1905. Killed in action 13 Dec 1941.

[3] P-O D. R. L. Brown, 41687, RNZAF; 453 Sqn. General hand and taxi driver; of Whangarei, NZ; b. Oldham, Lancashire, Eng, 23 Jun 1917. Killed in action 13 Dec 1941.

[4] F-Lt T. W. Livesey, 402870. 453, 21/453 Sqns and 1 FSHQ; comd 1 FSHQ 1944. Master builder; of Vaucluse, NSW; b. Sydney, 5 Mar 1914.

geants Read[5] and Collyer[6]—had just refuelled when enemy bombers made another attack on Penang across the strait. The three pilots immediately took off and intercepted three enemy bombers which were quickly joined by six dive bombers. Vanderfield found that the undercarriage of his aircraft would not retract but he went into action. He claimed two bombers and Read and Collyer three dive bombers between them. After rearming and refuelling Read and Collyer made successful low-level gunnery attacks on enemy troops and road transports to the north of Alor Star. By this time another flight of Buffaloes had reached Ipoh. They had just refuelled when warning of the approach of enemy aircraft was received. All available Buffaloes took off to intercept more than 40 enemy fighters. Vigors engaged the enemy until his petrol tank exploded and the aircraft caught fire. He baled out over Penang and as he descended one enemy pilot made several attempts to kill him. Though he had been badly burned on the legs, hands and arms, and wounded in one thigh, he succeeded in collapsing the canopy of his parachute when each attack was made and landed in a clearing on Penang Mountain from where he was carried to hospital by a rescue party. Residents of Penang reported that three aircraft had crashed into the sea near the island, and, though there was no confirmation that they had been shot down by Vigors, he was believed to have been the only pilot to have engaged them. Pilot Officer Angus[7] was attacked before he had climbed beyond 800 feet. His aircraft was seriously damaged but he crash-landed in a paddy field and escaped with a wound in one leg. Flying Officer Grace was scarcely airborne when he was attacked, but he succeeded in shooting down one of the enemy fighters.

Next day four Buffaloes of No. 453 Squadron led by one from No. 21 Squadron, flown by Flight Lieutenant White, attacked Japanese transport columns moving down the roads from the north. Three enemy dive bombers intercepted and White, who was last seen attacking one of them from the rear, is believed to have been killed by the enemy rear-gunner's fire. Another of the Buffalo pilots, Sergeant Oelrich,[8] was heavily attacked before he could gain height and was killed when his aircraft was shot down. Sergeant Seagoe[9] had one shoulder shattered by an explosive bullet fired from the ground, but with the other two surviving pilots succeeded in returning to Ipoh from their costly operation.

By 15th December the two fighter squadrons could put only three aircraft fit for combat into the air, a state for which enemy action was not solely responsible. The whole burden of maintenance had been

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[5] Sgt M. N. Read, 402952; 453 Sqn. Jackeroo; of Coonamble, NSW; b. West Maitland, NSW, 21 Jun 1917. Killed in action 22 Dec 1941.

[6] F-Lt V. A. Collyer, 402935. 453, 23 and 84 Sqns. Wool classer; of Narrabri, NSW; b. Narrabri, 7 Dec 1917.

[7] F-Lt G. L. Angus, 403009. 453 Sqn, 1 PRU, 82 and 77 Sqns. Clerk; of Turramurra, NSW; b. Ashfield, NSW, 17 Jun 1920.

[8] Sgt R. R. Oelrich, 402875; 453 Sqn. Assistant chief clerk; of Coogee, NSW; b. Summer Hill, NSW, 7 Feb 1918. Killed in action 14 Dec 1941.

[9] F-Lt G. E. G. Seagoe, 402883. 453 and 76 Sqns and 109, 114 MFCU's. Clerk; of Sydney; b. Sydney, 10 Jun 1916.

placed on the already overworked and understaffed ground crews of No. 21 Squadron, who also had to cope with increased trouble with the Buffaloes' guns. For example, when 3 Buffaloes intercepted 3 unescorted enemy bombers over Ipoh, only 4 of the total of 12 guns would fire. One bomber was shot down but there was little doubt that had all their guns been serviceable, the Buffalo pilots would have brought the score to 3. The harassed armament staff and Sergeant Haines[10] in particular accepted this as a challenge and worked tirelessly to overcome the trouble. The pilots paid tribute to him when, in their next engagement, all their guns were operating. On the day that the squadrons' combat strength was reduced to 3 aircraft, reinforcements arrived. Squadron Leader Harper, back from his visit to Australia, flew in to the base leading a formation of 10 replacement aircraft, 4 of which were for No. 21 Squadron. Before daylight on the same day Allshorn led a flight of 7 replacement Buffaloes off the runway at Sembawang for the flight to Ipoh. Soon after take-off they encountered what Flight Lieutenant Kinninmont later described as "the dirtiest weather we had ever seen . . . solid front stretching high up and miles long and raining like hell". Allshorn found a break in the dense cloud and turned through it, Kinninmont following. Separated from the other pilots they flew low over the rain-drenched jungle until they sighted an emergency landing ground at Port Swettenham. Allshorn landed safely but Kinninmont's aircraft ran off the runway into a swamp and overturned. He escaped unhurt. The rest of the flight was scattered in the rain and darkness. Hooper escaped with cuts when he crash-landed his aircraft in a paddy field where it overturned three times. The four other pilots returned to Sembawang and made the flight to Ipoh later in better weather. In only one week of war the Australian airmen had learned that the weather in Malaya could be a worse enemy than the Japanese.

The responsibility of R.A.F. Far East Command for the defence of Burma had, perforce, received little attention. In the face of the bitter fighting in Malaya it was understandable that Air Chief Marshal Brooke-Popham's theory that Burma's best defence lay in the defence of Malaya should still hold—he had little enough to fight with there, and could not spare men and equipment for the neighbouring area where the Japanese had given little more than a hint of their full intention. But it was also true that that hint had become significant. Part of a regiment of the *5th Japanese Division* had landed at four points well to the north of Singora. From the coast they had moved across the narrow tongue of southern Thailand into the parallel, and similarly tapering, extremity of Burma. By 9th December, the Japanese troops had reached Victoria Point, Burma's most southerly town, port and air base.

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[10] W-O E. H. Haines, BEM, 8481; 453 Sqn. Fitter; of Sydney; b. Sydney, 10 Nov 1918.

Meanwhile on 12th December the change which the Commander-in-Chief, India, General Sir Archibald Wavell[1] had most earnestly advocated —the transfer of the Burma theatre to his command—was ordered by the British Prime Minister.[2] Simultaneously the Air Ministry appointed Air Vice-Marshal Stevenson[3] to command the air forces in Burma, promising him reinforcements (chiefly from the Middle East) of 4 fighter, 6 bomber and 2 army cooperation squadrons, plus one general reconnaissance squadron "with the object of making a front in Burma should the Japanese campaign prove successful".[4] Pending the arrival of Stevenson, Group Captain Manning continued to wrestle with the problems of shortage of men, aircraft and supplies, while Colonel Chennault cooperated with him in unorthodox fashion and longed for sufficient forces to be able to strike the enemy as he had in China. At his base at Toungoo, Chennault had noted, with understandable bitterness, the dramatic early successes of the Japanese air forces to whom he had given such forceful "lessons" in combat more than three years earlier and about whose capacity in men and in aircraft he had been issuing unheeded warnings for so long.

Chafing at the Allies' lack of capacity to strike offensively, Chennault, on 10th December, sent a photo-reconnaissance Kittyhawk over Bangkok. When he saw the pictures taken from this aircraft, revealing the docks "jammed with enemy transports disgorging troops and supplies" he "exploded"; and the airfield was shown to be packed with Japanese aircraft parked wing-tip to wing-tip. With an over-simplification as typical as his outspokenness, Chennault declared that "a dozen bombers could have wrecked the Japanese air offensive in twenty minutes . . . one of the . . . times . . . when a kingdom was lost for want of a few planes."[6] Preparations were being made for a new base for the group at Kunming but, on 11th December, No. 3 Squadron A.V.G. moved to Mingaladon to join the R.A.F. in the defence of Rangoon.

The Japanese began sporadic air raids in the Tenasserim area with an attack on Tavoy airfield. Burma Command, having been obliged to base all its plans on the assumption that air reinforcements would come from Malaya, was now in the position of having to try to accomplish the almost impossible task of sending air aid to Far East Command. In his correspondence to London, the Governor of Burma, Sir Reginald Dorman-

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[1] Field Marshal Rt Hon Earl Wavell, GCB, GCSI, GCIE, CMG, MC. GOC-in-C Middle East 1939-41, India 1941-43; Supreme Comd SW Pacific Jan-Mar 1942. Viceroy of India 1943-47. B. Colchester, Essex, Eng, 5 May 1883. Died 24 May 1950.

[2] In his despatch Wavell describes the efforts of his predecessor as C-in-C India, General Auchinleck, and later his own, to induce the British Chiefs of Staff to make this change and refers to the placing of Burma in Far East Command instead of under India as "the cardinal mistake".

[3] AVM D. F. Stevenson, CB, CBE, DSO, MC. Director Home Operations, Air Ministry 1938-41; AOC 2 Gp Bomber Cd 1941, Burma 1942, Bengal Cd 1943, Northern Ireland 1944, 9 Gp Fighter Cd 1944; British Commissioner Allied Control Commission Rumania 1944-47. Regular air force offr; of London; b. 7 Apr 1895.

[4] AVM D. F. Stevenson, *Air Operations in Burma and the Bay of Bengal, January 1st to May 22nd 1942*, para 3.

[6] Chennault, p. 126.

Smith,[7] suggested that, however important the bombing of German industry might seem, Britain should spare bombers for the Burma campaign until the Japanese thrust had receded. His point of view coincided with that of Chennault:

> We have here (he wrote to Mr Amery on 11th December) aerodromes capable of receiving reinforcements, but it is, at the moment, plaguily difficult to see whence they will come. . . . What really infuriates is that we are incapable of taking the offensive against targets which present themselves, e.g. concentration of Japanese planes seen at Bangkok today by our fighter patrols. . . . Believe me, our need is very urgent.

Next day Dorman-Smith wrote that Victoria Point airfield had been blown up, adding:

> I have talked to American Lend-Lease people here tonight. They are mad-keen to give us supplies but feel unable to take the necessary responsibility. . . . Their recital of the armaments which they can give us now is mouth-watering.

On 13th December, Rangoon, capital of Burma, its name anglicised from the ancient Burman word *Yangon* meaning, ironically, "the end of strife", received its first air raid warning. There was no attack and the number of fighters—British and American—circling over the city gave its people great heart. Again there came news of another bombing raid in Tenasserim; this time it was Mergui that suffered. And then there came a lull in the enemy's activity in the air over Burma.

Meanwhile, far out in the North Pacific, the enemy were also turning their attention to the American island bases they had already attacked from the air. The Japanese, having given the air units two days in which to "soften up" the American defences at Guam, landed a force of about 5,000 at different points on the island on 10th December. After the small defending force had offered brave but hopeless resistance for about half an hour the inevitable was accepted; the island was surrendered after 42 years of American possession and the Japanese began to build up a naval and air base that would aid them in their long-range Pacific Ocean operations.

Next day a Japanese naval force attempted to land on Wake Island under cover of gunfire from escorting warships. But they took the island's garrison much too cheaply. The American shore batteries, aided by the four surviving Wildcat fighters, withheld their fire until the enemy ships were close to the shore, and then replied so effectively that the invading force was beaten off with the loss of two destroyers. The Wildcat pilots were having some success against enemy bombers that attacked regularly each morning. In those first few days of war two bombers were destroyed by their interception, the anti-aircraft batteries brought down a third, and several were damaged. Still hoping that relief might arrive the garrison remained defiant.

[7] Col Rt Hon Sir Reginald Dorman-Smith, GBE. Minister of Agriculture and Fisheries 1939-40; Governor of Burma 1941-46. B. 10 Mar 1899.

A British parallel for the gallant defence of Wake Island was being provided simultaneously in beleaguered Hong Kong. There the garrison of six battalions (two of them Canadian) having withdrawn to the island proper, prepared to do their utmost to withstand the *38th Japanese Division* reinforced with heavy artillery and possessing undisputed control of the air. On the night of 12th-13th December the Japanese commander's demand that the garrison surrender was defied. Naval and air bombardment of the island followed but still the defenders held out.

In their initial attacks on the Philippine bases the Japanese had deprived the Far East Air Force of so much of its offensive and defensive capacity that the defenders now faced the prospect of invasion in a "confused and nervous state".[8] At 3 a.m. on 9th December the enemy bombed Fort McKinley, just south of Manila, destroying the beam wireless station of Pan-American Airways, and Nichols Field where a hangar and other airfield buildings were wrecked. The two Flying Fortress squadrons of No. 19 Bombardment Group were summoned from Del Monte, Mindanao. It was intended that they should attack enemy airfields in south Formosa but the Japanese disposed otherwise. That night General Headquarters learned that one enemy seaborne force was approaching Vigan Bay on the north-west coast of Luzon and a second was closing on Aparri. Early on the next day five Fortresses attacked six transports that were putting troops ashore at Vigan under cover from a strong naval escort but with no effective air protection. Only 100-lb demolition bombs were used and the attack did little more than interrupt very temporarily the progress of the enemy's landing operations. One crew claimed that they left a transport sinking from a direct hit.

Fear that the heavy bombers would again be caught on the ground by a Japanese air attack dominated the thinking of the American air commanders. Instead of preparing the five aircraft that made the first attack on the enemy at Vigan for a second strike, the command ordered them back to Del Monte, 600 miles away. Three other Fortresses, prevented from landing at Clark Field by an air raid alert, were also sent back to the Mindanao base. The heavy bombers that remained made individual sorties, some of them with their bomb racks only partly filled because raid alarms had forced them to take off before they were ready. General Brereton has recorded a long-distance telephone conversation he had on 11th December with General Arnold in Washington, thus:

> He was excited and apparently under a great strain. "How in the hell could an experienced airman like you get caught with your planes on the ground?" General Arnold asked. "That's what we sent you there for, to avoid just what happened." I tried to explain what had happened, but halfway through the conversation the Japs came over strafing the field. "What in the hell is going on there?" General Arnold shouted. "We are having visitors," I replied. I asked General Arnold to withhold his judgement until he got a complete report on what happened at Clark

[8] Craven and Cate, *The Army Air Forces in World War II*, Vol I, p. 214.

Field, and said that we had done everything in our power to get authority to attack Formosa on 8 December but had been relegated to a "strictly defensive attitude" by higher authority. . . .[9]

A squadron of Kittyhawks and some aged P-35's also went into action over Vigan.[1] Several landing craft were sunk and ships damaged but inevitably the attack lacked anything like the strength needed to prevent the landing. Late that afternoon (10th December) Japanese aircraft were operating from Vigan airfield. Similarly, at Aparri, the enemy, after landing practically without opposition, promptly occupied the local airfield. Thus they had quickly gained two bases for close-support air operations.[2] Though their invasion forces lacked air cover the Japanese air units were by no means inactive. Del Carmen was attacked heavily and 12 P-35's were destroyed on the ground and 6 damaged. It was soon apparent that this raid was but a preliminary to much heavier attacks. About 12.30 p.m. on 10th December a large force of enemy bombers with fighter cover was seen approaching Cavite and Nichols Field. There was some interception by American fighters which cost the enemy several of their escort but the bombing force, in three formations of 27 aircraft each, swept on undisturbed at almost 20,000 feet while American pilots, who had been on patrol for so long that their aircraft had little fuel left, fought and flew until their aircraft were either shot down or forced down with empty tanks. Nichols Field received a rain of bombs that destroyed the main hangar, the air depot, fuel tanks, and several aircraft on the ground. At the naval base at Cavite the shipyard facilities, barracks, stores and hospital were soon blazing and in ruins. The loss of life was heavy, many people being trapped in the burning buildings. A submarine and a minesweeper were sunk. That night Far East Air Force had only 12 Flying Fortresses and 30 fighters fit for combat. General Headquarters thereupon issued an order that no more combat missions were to be flown by the fighters which were to be reserved for reconnaissance operations.

MacArthur's dilemma about how best to deploy his ground forces became still more acute on the next day when a third enemy force began to land at Legaspi in south-eastern Luzon. On 12th December Japanese aircraft struck once more at Clark Field and at Batangas and Olongapo. These bases were again their targets on the day following, with Nielson and Nichols airfields added. On 14th December 6 Fortresses were listed for an attack on the enemy bridgehead at Legaspi but only 3 aircraft reached the target area. Their bombing had little effect on the landing operations and only one of them returned. There were some exceptions to the ruling against fighter combat, as when 3 Kittyhawk pilots were allowed to dive-bomb enemy aircraft on the ground at Vigan and when

[9] *The Brereton Diaries,* p. 50.

[1] So worn were the engines of the P-35's that of 16 aircraft that took off from Del Carmen only 7 reached Vigan.

[2] According to Japanese records 18 fighters were based on Vigan airfield on 11th December and 24 on Aparri airfield on the 12th.

one of the 3, Lieutenant Boyd Wagner, who commanded No. 17 Pursuit Squadron, shot down 4 enemy fighters near Aparri and then went in to attack aircraft on the ground.

At Del Monte, where the remaining Fortresses were based, no facilities existed for proper servicing and maintenance. It was also apparent that it would not be very long before the enemy turned their growing air offensive against such an obvious target. Rumours that the Japanese settlers at Davao, who numbered about 30,000, were arming themselves and preparing to drive across Mindanao to the airfield, made the prospect gloomier still. Meanwhile at Olongapo 7 Catalinas of the American Navy's No. 10 Patrol Wing were caught on the water by Japanese air raiders and all destroyed. On 15th December the wing was ordered south to the Netherlands East Indies. All these disturbing factors weighed with General Headquarters which, acknowledging the corollary that the Japanese control in the air over Luzon defied further serious challenge, ordered that all airworthy Fortresses should be withdrawn to Darwin, 1,500 miles away. The movement was not immediately possible and there was no intention of giving up the struggle to defend the Philippines, but the decision did mean that in one week the Japanese had gone a long way towards driving the Far East Air Force out of the territory.

The significance of this situation, when linked with the already disastrous state of the Malayan campaign and the enemy's successes at all other points, may not then have been fully apparent, but none could doubt that in hesitating to strike before the enemy's offensive was fully mounted against Malaya and the Philippines, the Allies had given the Japanese the opportunity they most urgently needed. Seen in retrospect this is still more obvious. Before a shot had been fired or a bomb dropped in the Pacific, the planners in Tokyo had insisted that Japan must capture the rich natural resources of the southern area at the beginning of the war. And they had insisted further that unless the command of the air and the sea was immediately secured the minimum requirements for the mobilisation of supplies could not be fulfilled. Now, after only one week of war, wrecked aircraft and sunken ships in the Malayan, Hawaiian and Philippine areas were tragic testimony to the enemy's achievement of his first objective. Already the cost of Allied hesitation had proved very high.

CHAPTER 12

"HOURS NOT DAYS"

THE principal Australian reaction to the heavy reverses being experienced by the Allied forces in the Far East was an almost desperate effort to bring the urgency of their reinforcement and re-equipment into much sharper focus in British and American eyes. And the emphasis in this urgency was on time—time measured not in weeks or days but in hours.

The British appreciation of the situation in the Far East was placed before the Australian War Cabinet on 23rd December in the form of a long cablegram which Mr Curtin had received from the Dominions Office. Compiled by the Defence Committee of the British War Cabinet it began with emphasis on Britain's need to ensure the safety of sea communications "in the Atlantic first; in the Indian Ocean second". Then followed this surprising statement:

> There is not one base which would be acceptable to both United States and ourselves as affording sufficient protection to the interests of each, at which our own and United States forces equal or superior to the Japanese can be assembled.

To this assertion was added the observation that limited American naval support could be expected in the Atlantic where British and American interests coincide, and from the Asiatic Fleet, but not elsewhere.

Apart from the problem of lack of fighter protection, the appreciation continued, Britain could not provide a balanced fleet at Singapore at once. It was unsound, therefore, to send capital ships there at present. When a fleet had been assembled in the Indian Ocean its action would depend on conditions prevailing; it might have to relieve Singapore, or repel a threat to Australia and New Zealand, or operate for a time from its Indian Ocean base.

Cooperation with Chiang Kai-shek was described as "a cardinal point in Allied policy"; China's help would be needed for the final defeat of Japan. British Commonwealth forces must hold Burma, Ceylon, Singapore and southern Malaya, Java and southern Sumatra, and Timor. The United States had disclosed their strategic needs to be Wake Island, Hawaii, Samoa, Midway, Johnston, and Palmyra. To assist in offensive action against Japan the United States were being urged to make every effort to hold Manila. The appreciation then added:

> Singapore . . . is to be held at all costs. But should we . . . be forced out of Malaya we must make every effort to hold the other essential points in the East Indies. . . . It is very necessary that the United States forces should act offensively on sea, land and in the air, and at once . . . the retention of the Philippine Islands is of the first importance.

The British Joint Staff Mission in Washington, it was added, had been instructed to press for United States agreement to a British proposal that 90 American aircraft and their crews which were at Brisbane should be

sent to Malaya or the Netherlands East Indies if it was not possible for them to reach the Philippine Islands as planned. The United States was also being asked to send fighter and bomber squadrons to Britain to relieve more R.A.F. squadrons for overseas service. Of Australia's E.A.T.S. program, the appreciation stated: "We consider it essential to maintain the flow of air trainees from the Commonwealth and from New Zealand [and] methods of ensuring secure passage are being examined."

The Australian Chiefs of Staff, after examining this appreciation, produced a highly critical report which described the situation disclosed as most unsatisfactory. The reference to United States naval support was taken to mean that no support could be expected from the United States Pacific Fleet. The British assertion that there was not one base which would be acceptable to both the United States and Britain was "difficult to understand" since the protection of the interests of both America and Britain was identical and depended solely on regaining control of the sea by the defeat of the Japanese Fleet.

In American-British conversations at Washington in March 1941, the Australian Chiefs' report continued, it had been agreed that one of the principal operations to be carried out was "offensive action against the Japanese Mandated islands" by the United States Pacific Fleet. Now the Chief of Naval Operations at Washington had declared that the United States could undertake only certain defensive tasks to the east of 180 degrees longitude. If Britain was able to replace with her own ships those that had been put of action and was to raise the strength of the United States Pacific Fleet in capital ships and carriers so that it was decisively superior to the Japanese Fleet the situation in the Pacific would become more favourable. An attack on Japanese possessions in the mandated islands would then become possible. Such offensive action would provide more effective protection to Australia than the presence in the Indian Ocean of a British naval force inferior to the main Japanese Fleet. The intention of forming a separate fleet in the Indian Ocean was "obviously unsound". It played into the hands of the Japanese and might have most serious consequences. The only course was to await the result of further conversations then taking place at Washington and to recommend that an endeavour be made to re-establish confidence by offering adequate reinforcements to the United States Pacific Fleet in both capital ships and carriers at their selected base. The survey concluded with the assertion:

> We would again emphasise our view that it is unsound to divide . . . our forces . . . to defend widely dispersed interests. . . . It appears to us that the policy outlined is purely defensive and thoroughly unsatisfactory.

The "further conversations then taking place in Washington", to which the Chiefs of Staff had referred, were those arising from a second meeting between the British Prime Minister and the President of the United States. On the day on which the War Cabinet reviewed the British appreciation, Mr Curtin received a cablegram from Mr Churchill sent from Washington.

This made known the selection of General Sir Archibald Wavell, then Commander-in-Chief in India, as Commander-in-Chief in the South-West Pacific, with an American deputy—probably Major-General George H. Brett of the United States Army Air Corps. Mr Churchill presumed that the boundaries of the new command would include the Malay Peninsula, Burma, the Philippines and supply bases to the south, notably Darwin. Headquarters for the new command would be at Surabaya. American, British, Australian and Dutch naval forces would be under the command of an American admiral. Wavell would receive his orders from an appropriate joint body responsible to Mr Churchill and President Roosevelt. Wavell's principal subordinates would be the commanders-in-chief in Burma, Malaya, the Netherlands East Indies, and the Philippines. India (which would have an acting commander-in-chief) and Australia (except for Darwin and the northernmost part of the continent) would be outside Wavell's sphere. These were the two nations through which men and materials from Britain and the Middle East on the one hand and from the United States on the other could be moved to the fighting zone. The United States Navy would remain responsible for the whole of the Pacific Ocean east of the Philippines and Australasia.

To the text of this momentous agreement the Australian War Cabinet assented, adding as a rider that Mr Churchill would be informed that Australia would expect to be represented in the joint body that would give Wavell his orders.

On Christmas Day Mr Curtin sent a cablegram to the Australian Minister in Washington (Mr Casey) for communication to the President and the British Prime Minister. The portion relevant to the war in the Pacific read:

> At this time of great crisis I desire to address you both while you are conferring for the purpose of advancing our common cause. . . . From all reports it is very evident that in north Malaya Japanese have assumed control of air and sea. Small British army there includes one Australian division and we have sent three air squadrons to Malaya and two to the Netherlands East Indies. Army must be provided with air support otherwise there will be a repetition of Greece and Crete and Singapore will be grievously threatened. Fall of Singapore would mean isolation of Philippines, fall of Netherlands East Indies and attempt to smother all other bases. This would also sever our communications between the Indian and Pacific Oceans in this region. The setback would be as serious to United States interests as to our own. Reinforcements earmarked by the United Kingdom Government for Singapore seem to us to be utterly inadequate in relation to aircraft, particularly fighters. At this time small reinforcements are of small avail. In truth the amount of resistance to Japan in Malaya will depend directly on amount of assistance provided by Governments of United Kingdom and United States. Our men have fought and will fight valiantly. But they must have adequate support. . . . Our resources here are very limited indeed. It is in your power to meet situation. Should the United States desire, we would gladly accept United States command in Pacific Ocean area. President has said Australia will be base of utmost importance but, in order that it shall remain a base, Singapore must be reinforced. In spite of our great difficulties we are sending further reinforcements to Malaya. Please consider this matter of greatest urgency.

A copy of the cablegram was sent to the Australian High Commissioner in London, Mr Bruce, together with the text of a message received from Mr Bowden[1] in Singapore that same day, which read:

Referring to my recent messages, I feel that I must emphasise that deterioration of our position in Malaya defence is assuming landslide proportions and in my firm belief is likely to cause a collapse in whole defence system. The expected arrival of modern fighter planes in boxes, requiring weeks to assemble under danger of destruction by bombing, cannot save the position. The arrival of military reinforcements will be absorbed in relieving tired front-line troops and will create small differences. British defence policy is now concentrating on fighters and anti-aircraft defence of Singapore to protect the naval base, depriving forward troops of such defences including the Australian Imperial Force. Present measures for reinforcing Malayan defences can, from a practical viewpoint, be regarded as little more than gestures. In my belief the only thing that might save Singapore would be immediate dispatch from the Middle East by air of powerful reinforcements, large numbers of latest fighter aircraft with ample operational personnel. Reinforcements of troops should be not in brigades but in divisions and to be of use they must arrive urgently. Anything that is not powerful, modern and immediate is futile. As things stand at present fall of Singapore is to my mind only a matter of weeks. If Singapore and AIF in Malaya are to be saved there must be very radical and effective action immediately. It is doubtful whether the visit of an Australian Minister can now have any effect as the plain fact is that without immediate air reinforcements, Singapore must fall. Need for decision and action is a matter of hours not days.[2]

To Mr Bruce, directly, the Prime Minister added, "Anything you and Page can do at that end should be done without any delay whatsoever." (Sir Earle Page, whose mission was to emphasise Australia's viewpoint in London, had been there since October.)

Earlier, in a frank review of the war situation in Parliament, the Prime Minister made it clear that Australia could not contribute to an improvement in the naval situation. The most effective step that could be taken in the shortest possible time, he said, was to increase the army and to strive for self-sufficiency in munitions. Mobilisation of the army had therefore been ordered. So far as the air force was concerned, Mr Curtin assured Parliament that there was no limit to expansion except the nation's capacity to train men and provide them with aircraft. A qualification to this was the all-important question of time. The obstacles to rapid expansion were the commitments to the Empire Air Training Scheme, the difficulties in obtaining aircraft from overseas and the considerable time needed to develop the aircraft industry. The strategic disposition of the air forces of the British Commonwealth was the subject of discussions with the British Government, and the Governments of the United States and the Netherlands East Indies were also being consulted. To strengthen the

[1] V. G. Bowden, CBE. (With BEF in France 1915-19, Major, RE; Deputy Asst Director of Docks 1917-19.) Aust Govt Commissioner in China 1935-41; Government Representative in Singapore 1941-42. B. Sydney, 28 May 1884. Executed by Japanese 17 Feb 1942.

[2] On the recommendation of the Advisory War Council (18th December 1941) Mr Bowden had been asked to report on a proposal that "an Australian Minister or person of standing with the status of Minister", should be appointed to represent the Commonwealth on the new War Council in Singapore and that this representative should be the Council's vice-chairman.

nation's air defences through its own aircraft industry, "bold and ruthless" action was needed and the Government had decided that this industry should have the first degree of priority with expansion of production to the maximum the nation could attain as its objective.[3]

So much for the Prime Minister's public expression. In secret, the War Cabinet had surveyed the appreciations prepared by the Chiefs of Staff. The stern recommendation that the existing garrison at Rabaul should remain there unaided was approved on 18th December, though it was agreed that the prospect for reinforcing it should be reviewed constantly in the light of the naval situation. This, in effect, meant in the light of the possibility that American naval forces, if obliged to withdraw from the Philippines, might provide naval strength that would permit both the reinforcement of the garrison at Rabaul and its proper maintenance. The War Cabinet at the same time approved the reinforcement of the garrison at Port Moresby to the strength of an army brigade, and the air strength there, on threat of attack, to the capacity of the airfields.

Authority for the assembly of American aircraft and for the use of E.A.T.S. crews for these aircraft "where necessary", was also given by the War Cabinet in this period. In keeping with Mr Curtin's assurance to Parliament, a long-range plan for the expansion of the air force to a strength of 60 squadrons was approved in principle "to the extent to which expansion can be made effective and subject to the submission of detailed information". But this 60-squadron force must have seemed something of a dream to those who knew the current disposition of the combat units then under the operational control of R.A.A.F. Headquarters—13 squadrons in all and 5 of them armed with nothing more impressive than Wirraways.

Dependence on aircraft from Britain and America, to complete the establishment of existing units and form new ones, was illustrated by the orders then outstanding:

94 Hudsons
297 Vultee Vengeance dive bombers
54 Beaufighters
27 Douglas C-47A (Dakota) transport aircraft
6 Walrus amphibians
9 Catalinas

The key question of whether the Australian contribution to the E.A.T.S. could, or should be maintained, was also reviewed when, on 18th December, Air Chief Marshal Burnett reported that trainees hitherto were being sent overseas at the rate of 620 a month—523 were then ready to embark; 428 of them for Canada and 95 for Britain. The navy could provide escort to New Zealand, but not the whole way. The War Cabinet, however, held to its earlier decision that no trainees should go overseas for the present.

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[3] *Commonwealth Debates*, Vol 169, pp. 1070-72.

A report to the War Cabinet on the aircraft production programs showed that six Beauforts had been delivered and that, if production was not further delayed, 90 of these aircraft would be delivered by June 1942.[4] For other aircraft the daily production rate was: Tiger Moths (all for overseas) 3; Wirraways (local orders to be completed by March 1942) one; Wackett Trainer (local orders to be completed by March 1942) one. The Prime Minister emphasised that short-range planning was essential. The state of aircraft deliveries from overseas was that by 29th December (the last date of delivery in 1941) the total for the month had been 90, of which 52 were Hudsons and the remainder training aircraft of various kinds.

One Australian reaction to the Japanese successes was the evacuation of civilians from Port Moresby, Rabaul and Samarai by the flying-boats of Nos. 11 and 20 Squadrons. There was, too, a stimulation of reconnaissance operations from the island bases. On 15th December Flight Lieutenant Erwin[5] of No. 24 Squadron made a photographic reconnaissance flight in a Hudson over Kapingamarangi Island about 300 miles north of Rabaul. A merchant ship of between 4,000 and 5,000 tons, which put to sea as the Hudson flew over and which opened fire with light anti-aircraft guns without harming the Hudson or the crew, was the only vessel of size sighted. There were 19 barges, two lighters and a launch lying off shore and the enemy had built two slipways on the beach. The merchant ship appeared to be making its best speed on a northerly course. An obvious target for attack, it was selected for the first combat strike in the area. A flight of three Hudsons, one piloted by Erwin and the others by Flight Lieutenants Murphy[6] and Paterson,[7] found it about 20 miles to the north from Kapingamarangi and bombed it without obtaining a direct hit; one "near miss" was observed. The ship replied with light and ineffectual anti-aircraft fire. When Northern Area Headquarters received the report of this operation the reaction was sharply critical. A letter to the squadron on the 17th complained that the whole operation had been wasted effort and described the bombing attack as "lamentable". A comparison of this attack "with the opening phase of the attack on H.M.S. *Repulse* by Japanese pilots" was invited and the letter concluded with the somewhat theatrical sentence: "The Empire expects much of a few." On the same day a signal from Area headquarters told the commanding officer that the Chief of the Air Staff was "perturbed at the lack of information and bad reconnaissance reports submitted", and had complained of the weak attack, the absence of flight organisation and that too many bombs

[4] The six that had been delivered were the aircraft that had been sent to Singapore and returned (except for one retained for photographic reconnaissance) because they were unarmed and the crews insufficiently trained.

[5] F-Lt K. J. Erwin, 261863. 23, 24 and 32 Sqns. Flying instructor; of Kogarah, NSW; b. Newcastle, NSW, 10 Jun 1918. Killed in action 3 Mar 1942.

[6] Sqn Ldr J. F. Murphy, 262. 24, 32 and 12 Sqns; comd 24 Sqn 1941-42. Regular air force offr; b. 3 Oct 1917.

[7] F-Lt P. P. Paterson, 260515. 6 and 24 Sqns. Miner; of Pinjarra, WA; b. Perth, WA, 8 Feb 1915. Killed in action 24 Jan 1942.

had failed to explode. Again there was a dramatic conclusion: "If there is no improvement in quality of work will consider withdrawal your squadron and replacement." Then followed a signal from the Air Board asking for answers to five specific questions concerning the operation and a further signal from Area Combined Headquarters, Townsville, asking for reasons for the delay in submitting the report.

There was impish irreverence in Wing Commander Lerew's reply. The final answer in his statement of reasons for the delay and explanation of his communication difficulties was: "Disappointment in the lack of assistance rendered by the Almighty." To his long signal he then appended the comment, "The Empire expects much, repeat much, of a few." There is no record available to show the reaction of the Chief of the Air Staff or of the Air Board. Whatever it was, Lerew remained unsuppressed. In his written report, having explained that his signals and cipher staff was "totally inadequate to cope with the volume of signals associated with even one operation carried out by one aircraft", he closed with the statement:

> It is regretted that all these misunderstandings and annoying delays have occurred, creating a position in which more worry is being caused from the south than from the enemy situated in the north.

In between these exchanges Lerew himself flew a Hudson to Kapingamarangi. His aircraft was met by accurate and heavy anti-aircraft fire through which he dived to attack a seaplane as it was taking off, but without success. He then dropped two bombs on one of the slipways and an anti-submarine bomb (which failed to explode) among moored seaplanes. Enemy aircraft endeavoured to attack the Hudson but Lerew eluded them and returned to Rabaul. Two days later Erwin made another photographic sortie over the island and, like Lerew, evaded attack by a float-plane.[8] Then, on Christmas Day, two Hudsons piloted by Paterson and Flight Lieutenant Diethelm,[9] made another flight to the island which was now being used by the enemy as an advanced base for float-planes and probably a flying-boat refuelling base. They bombed the base without observing any hits and took further photographs. On 30th December three replacement Hudsons reached Lakunai airfield and the Hudson section of the squadron changed its primary role from reconnaissance to that of a striking force.

While contending with the difficulties which the Hudson operations entailed, Lerew also found many problems in directing the Wirraway operations. On 18th December he had sent a flight of five of these aircraft to the lower airfield at Lakunai with Flight Lieutenant Brookes[1] in charge.

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[8] It was from these photographic flights that the first RAAF target map was made. It was prepared under the direction of P-O J. P. Deverteull, photographic interpretation officer in the Intelligence section at Northern Area HQ, by Cpl L. E. A. Nash. Sun prints were made from a tracing for which an Admiralty chart was the basis.

[9] Sqn Ldr O. G. Diethelm, 260518. 23, 24 and 32 Sqns and 73 Wing HQ; test pilot 15 ARD 1944. Grazier; of Rowena, NSW; b. Grafton, NSW, 31 Jan 1912.

[1] Gp Capt W. D. Brookes, DSO, 250299. 21 Sqn; comd 24 and 22 Sqns 1942, 78 Wing 1943-45. Engineer; of Toorak, Vic; b. Melbourne, 17 Apr 1906.

Here there was no effective anti-aircraft defence: two 3-inch guns on a ridge to the north of Rabaul town but neither had predictors. Seven Vickers machine-guns which arrived from Australia were passed to the army—4 for Vunakanau and 3 for Lakunai. Since the squadron's movement to Rabaul had been by air—the ground staff were brought in by flying-boats—there was a serious shortage of men. The Wirraway flight began operations from Lakunai with 5 pilots, 5 observers and 6 ground staff members. Between 40 and 50 natives were employed as manual workers and, gradually, camouflaged dispersal bays were built and squadron quarters erected. Works progress, distressingly slow, was hampered by lack of authority to requisition civilian services; equipment that should have been available to the armed Services was being used for normal commercial purposes. It was some time before Vunakanau and Lakunai could be linked by even a single (and unreliable) telephone line and movement by road was a tedious business because the roads were bad and transport vehicles few. The Wirraway crews mounted a morning reconnaissance patrol over the north coast of New Britain as far west as Cape Lambert, returning on a reciprocal track and then along the coast as far as Wide Bay to cover St George's Channel. Two flights of aircraft operated this patrol on alternate weeks, taking off at daylight and returning about 7 a.m. The engines of all serviceable aircraft were run up each day before dawn and Lerew ordered that, at all times, the aircraft were to be at one of three stages of readiness: "Available", "In readiness" and "Strike".[2]

In December the flying-boats of Nos. 11 and 20 squadrons made more than 100 search and reconnaissance flights from Port Moresby, Rabaul, Tulagi, Soraken, Samarai, Kavieng, Noumea, Vila and Suva, and all the approach areas were patrolled on a front from north of the Admiralty Islands, through New Ireland to a point east of the Solomons, and then through Santa Cruz, and the New Hebrides and south to New Caledonia.

Australia was now very actively concerned about the security of the Dutch East Indies bases. Squadron Leader Ryland, when taking over command of No. 13 Squadron, had estimated that the air reinforcements needed were at least two medium bomber squadrons and three fighter squadrons, while at least two more airfields were also required; when ten Hudsons were operating from Laha the airfield was "crowded". So far as the welfare of the R.A.A.F. portion of the garrison was concerned, a major difficulty at Laha was lack of good drinking water. These conditions were noted by Flight Lieutenant Church,[3] advance operational base officer for the area, when he inspected all Dutch bases where

[2] Available: ready for operations within 15 minutes. In readiness: warmed up with the observer at the aircraft and the pilot in the operations room. Strike: with pilot and observer strapped into the aircraft and ready to take off at a visual or oral signal from the operations room.

[3] Sqn Ldr A. E. Church, 261678. Equipment Offr HQ Pt Moresby 1941, HQ Northern Area (attached 12 and 2 Sqns) 1941-42, HQ North-Eastern Area 1942, 9 Gp 1943, HQ RAAF Cd 1943-44, SEO 1 OTU 1944-45. Merchandise manager; of Vaucluse, NSW; b. Newbury, Berkshire, England, 29 May 1900.

R.A.A.F. units were stationed in the latter half of December. Aircraft refuelling equipment was much below requirements, he reported, and lack of workshop equipment made efficient maintenance almost impossible. Defence measures included the erection of "pill-boxes" round the airfield. On the arrival of the A.I.F. contribution to the garrison, R.A.A.F. units were relieved from routine defence duties. At Namlea, Church found conditions similar, but here proper equipment for boiling and cooling water meant that the sick parade was much smaller. Airfield defence was undertaken by a company of native troops of the Dutch Army and large bamboo gate-like obstructions were kept in position on the runways until approaching aircraft were identified as friendly. Living conditions were better than at Laha—no blackout was enforced and native produce (eggs, chickens and fresh fruit) was available.

At Koepang, Church found conditions reasonably satisfactory. The Dutch civil airline, K.N.I.L.M., and the A.I.F. cooperated well with the R.A.A.F. Lying in open country Koepang airfield presented difficulties, for there were no means for camouflaging aircraft. Returning to Darwin, Church found the supply problem for the whole area "chaotic" both at the railhead and the wharves. Stores arriving for all three fighting Services —many of the crates were inadequately marked—were piling up rapidly and, when removed, often went to the wrong destination.

Between 17th and 22nd December the 2nd Independent Company and some 260 Dutch troops were landed at Dili in Portuguese Timor and took up positions in and round the town and airfield.

On Christmas Eve 10 American Navy Catalinas arrived at Halong. Based on the United States Navy tender *Heron,* they gave some added strength that was heartening. The operations of these aircraft were coordinated but not controlled by the Area Combined Headquarters.

The sighting by an American Catalina of a destroyer steaming about 300 miles north from Namlea and 40 miles north-west from Menado in Celebes, was reported to A.C.H., Halong, on 28th December. There were no reports of friendly shipping in the area and three Hudsons from No. 2 Squadron at Namlea took off to attack. They found the destroyer and bombed with, it proved, unfortunate accuracy—the ship was the American destroyer *Peary.* Partly disabled she put in to Ternate for repairs. The crews of the Hudsons were not held blameworthy; they had made the attack under orders from A.C.H., Halong, which had no knowledge of the *Peary's* presence in these waters.[4]

[4] Though damaged in the early attack on Cavite and subjected to further air attacks in the waters off Corregidor, *Peary,* still serviceable, left on 27th December for Java. On her way she was attacked, first by a four-engined patrol aircraft, then by three more, with bombs and gunfire, and later by two torpedo-carrying aircraft which launched four torpedoes and one of which returned to bomb. By skilful navigation and good fortune the destroyer came through all these attacks unharmed. After the first attack her commander tried to signal to Admiral Glassford that his ship was being attacked but radio contact could not be made. Of the Hudsons' attack the American naval historian has recorded that *Peary* exchanged recognition signals but they were not convinced that she was friendly. One Hudson made a glide-bombing run and the ship's anti-aircraft crews naturally fired in self-defence whereupon the other two joined battle. The destroyer manoeuvred so sharply that one man fell overboard. But one bomb, a near miss, damaged her steering gear. Thus "there was slight satisfaction in knowing that our allies were better marksmen than our enemies!"—Morison, *History of United States Naval Operations in World War II,* Vol III, pp. 196-7.

The commander of "Gull Force" (the A.I.F. troops at Ambon), Lieut-Colonel Roach,[5] held strong opinions about the weakness of the combined forces available for the defence of Ambon. In signals to the Central War Room he bluntly expressed the need for reinforcements which, he said, should include two troops of field artillery, two troops of anti-tank artillery, six mortars and two rifle companies fully equipped. He warned the War Room that there were indications that the position of the defenders would be precarious even with these reinforcements and weapons. There was also a plea from the R.A.A.F. at Laha to Northern Area Headquarters for adequate fighter strength for the protection of the base. On the 29th a signal sent to the Central War Room made a strong plea for air reinforcements on the basis that Japanese successes had so far indicated that attack against aircraft on the ground must succeed if not opposed by fighters and, conversely, that an Allied attack on a target defended by fighters could not succeed when made by a small number of relatively slow aircraft. "Ambon area can at present be destroyed by (fleet air arm) bombers or long-range fighters," the signal added "Two, repeat two, Brewsters at present stationed Laha utterly inadequate for defence. Consider imperative that fighter aircraft be dispatched to Laha and Namlea immediately, preferably within four days. Even Wirraways are useful although more recent types are requested . . . enemy tactics aim first at destroying dromes and aircraft on the ground, second at carrying out unmolested bombing, third at dispatching transports when defending aircraft immobile. Repeat request fighter protection this area be regarded as priority matter." The reply was short and sharp. "No fighters available," it read, and added, in admonition, that the signal to which this was a reply should have come from Area Combined Headquarters and not the General Staff Officer. If Roach still had any doubts about the availability of reinforcement aircraft they must surely have been dispelled by another signal, received on the same day, in which the Central War Room stated that the demolition of airfields in the event of attack was being considered and that A.C.H. should report on any plans for demolitions at Laha and Namlea.

A series of air attacks on the outlying bases had now developed. Though these were comparatively light they indicated that the enemy was preparing to strike more deeply. Ternate and Sorong (on the north-west tip of Dutch New Guinea) were raided on 17th December and Sorong was again attacked on the 23rd and 28th. On the 30th Babo in Dutch New Guinea was raided. Wing Commander Scott,[6] the senior R.A.A.F. officer on the staff of Area Combined Headquarters, had inspected Babo on 22nd December to report on its possible use as a substitute base should Laha and Namlea become untenable under enemy

[5] Lt-Col L. N. Roach, MC, ED, VX41587. (1st AIF: Capt 5 Bn; Indian Army.) Comd 2/21 Bn 1940-42. Secretary; of Kew, Vic; b. Neutral Bay, NSW, 3 May 1894.

[6] W Cdr E. D. Scott, AFC, 250101. 1 Sqn; comd 6 Sqn 1940-41, RAAF Component, ACH, Halong, 1941-42. Commercial pilot; of Heidelberg, Vic; b. Heidelberg, 5 Oct 1913. Died while prisoner of war, 6 Feb 1942.

attack. Immediately the news of the raid on Babo was received, three Hudsons were sent there from Laha to do temporary duty as "fighters".[7] Three of No. 13 Squadron's aircraft were recalled from Namlea and their place was taken by a flight of four from No. 2 Squadron with Flight Lieutenant Cuming in command. This flight then came within the operational control of A.C.H., Halong. By this time No. 13 Squadron at Ambon and No. 2 Squadron at Koepang were coordinating their operations to such an extent that their aircraft and crews were virtually pooled.

At the Dutch Army Headquarters at Bandung there was now much concern about the weakness of the air forces in Java. Through the R.A.A.F. liaison officer, Wing Commander Thomas,[8] a request was made for more Australian troops. This plea came before the War Cabinet on 30th December but, since the *Defence Act* prohibited the dispatch of militia troops outside Commonwealth territory, the request was refused.

Thus at the year's end the Australian and Dutch land and air forces that were dispersed over the outlying Netherlands East Indies bases, had become sharply conscious of battles to come and, in common with all other Allied forces opposing the Japanese, of the inadequacy of their strength to meet a direct assault.

[7] The Hudsons were regarded as being a match for any enemy aircraft—probably 4-engined flying-boats—that could reach Babo at this time. Scott had found the Dutch garrison working hard on improvements, including a second runway.

[8] Gp Capt Sir Frederick Thomas, 250097. Comd 2 Sqn 1939-41; Special duties NEI 1941-42; comd RAAF Stn, Townsville, 1942; SASO North-Eastern Area 1942-43; Director of Air Tactics and Operational Requirements 1943-44; SASO RAAF Mission to USA 1944; Director of Operational Requirements 1945. Lord Mayor of Melbourne 1957-59. Flour miller; of Toorak, Vic; b. Nathalia, Vic, 27 Jun 1906.

CHAPTER 13

THE BARRIER WEAKENS

WHEN, on 18th December, the Australian Advisory War Council had surveyed the depressing news of the loss of the *Prince of Wales* and *Repulse*, the evacuation of the airfields in northern Malaya and the continued withdrawal of the British land forces there, the Leader of the Opposition, Mr Menzies, strongly challenged a statement made in a cablegram received from the British Government. This claimed that British naval losses and the loss of the forward airfields had "compelled our land forces to face a situation which had not been contemplated inasmuch as they must now bear the brunt of attack by Japanese forces enjoying sea and air superiority. . . ." This, Menzies described as a "fatuous statement". A battleship force had been made available only recently and it had always been clear, he said, that in view of the shortage of British equipment the Japanese would have temporary naval and air superiority.

In Malaya itself it was apparent that the enemy could not be held in check effectively unless and until the aid, now the subject of so much last-minute planning, reached the battle front. And, as the days passed, that front was moving southward while the Japanese air forces were multiplying the number of their daily attacks. To Air Headquarters the explanation was depressingly simple. While their own airfields were under constant and increasing attack and their losses on the ground mounting because their defences were so weak, the enemy now had an aircraft superiority estimated at three, perhaps four, to one. In turn the enemy-held airfields were most difficult to attack, not only because of the weakness of the British bomber force, but because, for lack of fighter cover, that force was so vulnerable. This weakness in air strength had another serious consequence: Far East Command had no effective means of checking the arrival of Japanese reinforcements. Thus, when the enemy's second convoy arrived off Singora and Patani on 16th December, bringing with it the bulk of the *XXV Army's* heavy equipment, the landings were carried out under strong air protection without serious threat from the defenders' air forces.[1]

On the day on which Menzies had criticised the British statement, an inter-Allied conference, called at the suggestion of President Roosevelt, was held in Singapore. Its main conclusions were the obvious ones that the enemy must be held as far north in Malaya as possible; held, too, in the Philippines; and prevented from acquiring territory, particularly airfields, from which they could threaten the arrival of reinforcements. The American convoy, then on its way to Brisbane, should go instead to Surabaya where the aircraft it carried could be assembled and flown

[1] The first enemy invasion force had been lightly equipped so that it might have mobility for what was expected to be a hazardous and strongly opposed landing.

to their destination—the Philippines. A sub-committee assessed the air needs at 4 fighter squadrons, 4 bomber squadrons, one photographic flight, one transport flight, and reserve aircraft at the rate of 100 per cent for fighters and 50 per cent for bombers, with additional aircraft to complete existing squadrons and provide their reserves.

Nine days after the conference a definite promise was given to the commanders in the Far East that they would receive reinforcements. Details were:

Air: 51 Hurricanes (one squadron with 18 additional pilots, then in convoy), 24 Blenheims (one squadron, from the Middle East) and 52 Hudsons (from Britain). Release of three additional fighter squadrons from the Middle East and 80 four-engined bombers from America was being planned.

Land: Two infantry brigade groups and reinforcements for the 9th and 11th Indian Divisions (from India), an anti-tank regiment and two anti-aircraft regiments (one heavy and one light, then in convoy), a light tank squadron (from India), the 53rd Infantry Brigade of the 18th British Division, guns and transport to follow later, a machine-gun battalion and reinforcements for the A.I.F. brigades (from Australia).

A factor in the decision to provide these reinforcements was the improvement in the Allies' general war position created by unexpected victories by the Russian armies in eastern Europe and General Auchinleck's successes in Libya. As it had been from the moment war came to the Far East the critical factor was time. Some weeks at least must pass before any appreciable strength could be added to the fighting forces in Malaya and every day was increasing the debit which would have to be made up from these reinforcements.

While this planning had been going on, two depleted Australian fighter squadrons (Nos. 21 and 453) had been striving to give at least some aid to the hard-pressed army forces in Malaya from their now extremely vulnerable air base at Ipoh. But the cost was too great; fighter aircraft were now so precious that G.H.Q. found it necessary to order that, primarily, the fighters should be used for reconnaissance for III Indian Corps and not against ground targets, for the wastage in aircraft could not be made good at the expense of the defence of Singapore. There was some confusion at this stage when Norgroup issued orders to the squadrons for further operations against ground targets in support of the army—operations which, understandably, greatly stimulated the spirit of the weary troops. In effect the overriding G.H.Q. order, which was so disappointing to the ground forces, confined the fighter operations to the defence of the Ipoh area with such reconnaissance sorties as III Corps might call for. In daylight a standing patrol was kept over the airfield and all other aircraft were on stand-by ready for immediate take-off when a raid warning was received. Stand-by duty was a test of endurance for the pilots strapped into their cockpits which, Flight Lieutenant Kinninmont recorded later, were like an "inferno". "Sweat trickled down . . . and soaked into the parachute," he wrote. "The metal on the planes was too hot to touch. The ground crews sat sweating in the shade of the wings." In such

circumstances the signal for "scramble" brought blessed relief though the pilots knew that the odds in combat were almost certain to be heavily against them. This method of readiness was preferred to dispersal, if only for the reason for a fighter pilot's existence—air combat.

This was the situation when, on 17th December, three Zeros dived in at low level, unobserved until they were over the airfield. The standing patrol engaged them eagerly. It was the first time the Buffalo pilots had had an opportunity of meeting the Zero pilots on anything like equal terms. After a ten-minute battle which was inconclusive the Zeros evaded further action and disappeared, leaving the Australians more deeply impressed than ever by their flying qualities; their own aircraft had been outflown in every manoeuvre their pilots could perform. The thrill of the fight was still fresh when the cry "Scramble!" sent the eight serviceable Buffaloes on the airfield into the air. "Large force of enemy planes coming in from north. Go to Angels twenty," the controller told them.[2] The Buffaloes gained height and closed to intercept ten Zeros which immediately wheeled and made off. With their superior speed the enemy pilots kept just out of range of their pursuers who followed them until it was obvious that the chase was hopeless. They then turned back to base and came over the airfield to see clouds of smoke rising from burning aircraft on the ground and ruined station buildings. Too eagerly they had taken the enemy's bait. In their absence ten bombers had flown over in complete safety to make an attack in which they destroyed three grounded Buffaloes and several buildings. It was not a new trick but it had succeeded. Even so, it had been only half played. The Buffaloes came in to land, and just as the last of them were taxiing across the airfield a second bombing raid began. One of the fighters swerved into a deep drain and was wrecked. Another was caught by the blast of an exploding bomb and flung on to its side with one wing ripped off. A small transport plane used as a mail carrier, that had already narrowly escaped when two Buffalo pilots had mistaken it for an enemy aircraft, received a direct hit. It was blown to pieces and its crew of two and two passengers were killed.

On this very day when the operational reports from Ipoh told of vain endeavours to meet and fight the enemy in the air and then of being caught by a trick with their fighters on the ground, Air Headquarters issued a memorandum explaining the reasons for insistence that aircraft must stay on the ground when raid warnings were received. It read:

> Further to the decision that aircraft stay on the ground if aerodromes are attacked by the Japanese; reasons for this decision are:
>
> (*a*) Great confusion if rush take-off attempted.
>
> (*b*) Japanese fighters will probably either carry out attack alone or escort bombers; aircraft taking off would be easy meat.
>
> (*c*) If aircraft took off, aerodrome defences, including Bofors, could not fire.
>
> (*d*) Crews of aircraft can take cover in almost complete safety.
>
> (*e*) Good dispersal of aircraft and use of pens should keep aircraft losses down.

[2] "Angels" was the code word for thousands of feet in altitude.

(*f*) False alarms of attacks will not cause waste or damage.
(*g*) Our aircraft floating about would greatly confuse A.A. defences.
(*h*) This refers to air raids at any time of the day, not only at dawn.

It seems that this memorandum, with its odd colloquial touches, was beyond criticism only when the anti-aircraft defences, the cover provided on the airfields, and the dispersal for aircraft, were all adequate—a happy set of conditions that was all too rare. In any circumstances it was, of course, opposed to the fighter pilot's psychology. And in this bitter campaign fighter pilots were learning that nothing could be more frustrating than to be held inactive on the ground while demonstrations of good bomber formation flying and even fighter aerobatics were being given directly over their heads by an enemy whom to meet and to kill was their first purpose in war. Apparently the memorandum did not reach the squadrons at Ipoh for there is no indication that the order was obeyed there. Perhaps it was not intended for units on airfields other than those on Singapore Island.

However that might be, at Ipoh next morning part two of the enemy's trick was tried again. Immediately the raid warning was received 6 Buffaloes took off, failed to intercept the enemy, and returned and landed. Two of the aircraft were still making their final taxi run when 15 bombers attacked. Both aircraft were caught in the bomb line and destroyed though both pilots had time to leap from their cockpits and tumble into slit trenches and safety. The squadron equipment officer, Flight Lieutenant Hordern,[3] was mortally wounded when a bomb burst beside a motor-car in which he had just driven on to the airfield. At midday 3 Zeros again swept in on a low-level gunnery attack, but the 3 Buffaloes they damaged did not take fire and the ground staff, working fast, had all three serviceable again by nightfall. Between raids the station staff had been striving to improve the facilities for operational control and to improvise an observer system. The ease with which the enemy was able to take the base unawares was puzzling until an enemy agent with radio-telephone equipment was discovered on a hilltop near the airfield.

On the evening of 18th December Air Headquarters ordered that all aircraft that could be flown but were not combat-worthy should be sent back to Singapore. The repair and salvage unit worked all night and next day 6 aircraft of No. 453 Squadron were sent south. The two squadrons now had only 7 operational aircraft at Ipoh. That morning, after another decoy alarm, 3 Sallys came in at 500 feet from behind a hill and destroyed 2 more of No. 21 Squadron's Buffaloes—the only 2 they had left that were fit for combat. The enemy ground forces were now pressing hard about 40 miles north of Ipoh, and later that day (19th December) the threat to the airfield was such that Air Headquarters ordered that it should be evacuated. No. 453 Squadron with their 5 aircraft moved immediately to Kuala Lumpur, while No. 21 Squadron received orders to

[3] F-Lt F. W. Hordern, 1112; 21 Sqn. Photographic clerk; of Bexley, NSW; b. Lidcombe, NSW, 25 Jan 1914. Killed in action 18 Dec 1941.

move all equipment, fuel, bombs and ammunition to Sembawang. This order was received at 10 p.m. and by 2 a.m. the squadron was ready to leave, a great burden of the work falling to the unit's tireless adjutant, Flight Lieutenant Montigue.[4] When the squadron reached Sembawang, Squadron Leader Allshorn was posted to the staff of station headquarters and Williams, now a squadron leader, was appointed to command the unit.

Ten more Buffaloes were immediately flown to Kuala Lumpur to restore the strength of No. 453 which was now the only fighter squadron based on the Malayan mainland.[5] Their new base was on the peacetime site of the Kuala Lumpur Flying Club where hurried efforts were still being made to transform it into a forward battle station. Accommodation was reasonable enough; in fact the pilots found unusual comfort in the home of a wealthy Chinese who had hurriedly departed leaving well-filled storerooms. On the day after the squadron's arrival Air Headquarters ordered Norgroup Headquarters to disband, leaving Wing Commander Darley, R.A.F.,[6] in command of the station and in charge of fighter operations.

In the first day of operations from Kuala Lumpur—21st December—Sergeants Peterson[7] and Leys[8] were flying the standing patrol when they intercepted about 14 dive bombers (the Japanese version of the Junkers 87N) escorted by about the same number of Zeros. Leys promptly turned on the enemy fighters while Peterson attacked the bombers. Against such odds Leys' Buffalo was quickly shot down. He baled out and as he descended the Japanese fired on him repeatedly. He escaped, though his parachute was perforated many times by bullets. Peterson, evading the fighters, shot down one of the bombers, probably destroyed a second and damaged a third. Later the airfield was bombed but the damage was not extensive.

At 10 a.m. next day a strong enemy air formation was reported to be approaching. Twelve Buffaloes, led by Flying Officer Vanderfield, took off and gained height in time to meet 6 Zeros which soon were joined by more enemy fighters until the Buffalo pilots were dog-fighting against more than 20 Zeros and an uncounted but strong force of Tonys (Kawasaki 61) believed at the time to be German Messerschmitt 109's. The battle was confused and widespread. Pilot Officer Drury[9] fought until his

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[4] W Cdr E. A. Montigue, 1980. 21, 21/453 and 100 Sqns; HQ 1 TAF. Private secretary; of Balwyn, Vic; b. Richmond, Vic, 2 Apr 1915. Died 12 Nov 1954.

[5] One other unit on the mainland was a flight of six Wirraways at Kahang originally formed as an operational training unit when No. 21 Squadron was rearmed with Buffaloes. Known, for reasons now obscure, as "Y Squadron" this unit did in fact engage in hazardous ground support operations—chiefly dive-bombing—but it was not a combat unit in terms of air defences.

[6] Gp Capt H. S. Darley, DSO, 32191, RAF. Comd 609 Sqn RAF and RAF Stn Exeter 1940-41; AHQ Far East Cd (comd RAF Stn Kuala Lumpur) 1941; comd RAF Stn Risalpur (India) 1942-43; 221 Gp 1943; comd 151 OTU RAF 1943-44, 62 OTU RAF 1944-45, RAF Stn Cranfield 1945. Regular air force offr; of London; b. Wandsworth, London, 3 Nov 1913.

[7] Sgt E. A. Peterson, 402951; 453 Sqn. Public servant; of Canberra; b. Melbourne, 10 May 1917. Killed in action 22 Dec 1941.

[8] F-O K. R. Leys, 402955. 453, 21/453, 24 and 84 Sqns. Farmer; of Gunnedah, NSW; b. Gunnedah, 28 Aug 1920.

[9] P-O R. W. Drury, 207698; 453 Sqn. Accountant; of Gladesville, NSW; b. Newcastle, NSW, 15 Nov 1914. Died of injuries 22 Dec 1941.

aircraft was so badly damaged that he had to make a crash landing in which he was seriously injured. He was taken to hospital where he died that night. Pilot Officer Livesey began the fight with a damaged aircraft —it had struck an anti-aircraft position in taking off—and he was unable to retract its undercarriage. Four Zeros, after pursuing him for some miles, their cannon fire smashing into his Buffalo, finally gave up the chase when they failed to shoot him down. Though he was wounded in one leg, Livesey was able to make a safe crash landing. Enemy gunfire set the Buffalo flown by Sergeant Scrimgeour[1] blazing. Burned on the face and arms he still managed to bale out. He too was attacked as he descended, but he landed safely and was brought back to the base by an army party which also brought in Sergeant Board,[2] another pilot whose aircraft had been shot down. Sergeant Collyer fought until his Buffalo was so severely damaged that he had to evade further combat. By nursing it he succeeded in flying to Sembawang where, on landing, he was taken to hospital with one foot smashed by shrapnel. Sergeant Read was killed when his aircraft crashed after ramming an enemy fighter.

The battle was one of the very few in Malayan skies in which the enemy had been met by a reasonably strong force. For No. 453 Squadron the toll was heavy. Two pilots had been killed and 4 had been wounded or injured. Three Buffaloes had been shot down, 2 had made crash-landings and 4 others had been damaged. In return the squadron claimed only 4 enemy aircraft as destroyed, but army reports on the next day accounted for the wreckage of at least 10. The casualties were increased when, soon after the battle, a fresh force of enemy fighters made another surprise low-level attack on the airfield. Sergeant Peterson, the only pilot who had taken off, was shot down from a height of only 700 feet and killed. The squadron now had only 3 serviceable aircraft left and the drain on replacement aircraft had become so heavy that Air Headquarters, unable at this stage to restore the strength, ordered its withdrawal to Sembawang. Having buried their three comrades who had died in the last battle over a mainland base, the unit withdrew from Kuala Lumpur after three unforgettably bitter days of unequal combat. By Christmas Day the movement had been completed and the squadron was once again established at Sembawang.

Meanwhile the wastage in fighter aircraft had caused Air Headquarters to issue an order on Christmas Eve that Nos. 21 and 453 Squadrons should be temporarily merged, under Squadron Leader Harper, though each would retain its identity. Known provisionally as No. 21/453 Squadron, the two units were each given 8 Buffaloes. Their task was to carry out reconnaissance as ordered by III Indian Corps and to provide cover for squadrons engaged in dive-bombing or bombing enemy airfields.

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[1] F-Lt S. G. Scrimgeour, 402986. 453, 24 and 457 Sqns. Clerk; of Waratah, NSW; b. Newcastle, NSW, 12 Dec 1920.

[2] P-O G. R. Board, 402845. 453 and 21/453 Sqns. Student; of Potts Point, NSW; b. Point Piper, NSW, 5 May 1921.

Kuala Lumpur and Port Swettenham were to serve as advanced landing grounds and a maintenance detachment from No. 453 Squadron was sent to Kuala Lumpur.

For some time Air Headquarters had been acutely aware of the congestion that must occur as squadrons were withdrawn from the mainland. Soon after the Japanese struck, Air Vice-Marshal Pulford, with the assistance of General Percival, planned the construction of new runways in Johore and on Singapore Island. Together the air force and the army, sparing what troops they dared, had worked on this task.

Lessons from combat were now applied by the armament and engineering staff in an attempt to modify the Buffalo to give it better performance. Radical changes were made but, since nothing could be done to improve the fuel pressure system, pressure at altitudes above 18,000 feet had still to be obtained by operating a hand pump. The consequence was that it was quite impossible for a pilot while using the pump to engage in combat. Armament troubles also persisted and radio-telephone communication had to be abandoned.[3] These efforts gave final proof that nothing could be done to make the Buffalo a match for the Zero.

The method of withdrawal from the mainland airfields had become so questionable that, on 24th December, Air Chief Marshal Brooke-Popham issued a critical and confidential memorandum in which he appealed to all air force officers to ensure that there should be no grounds for further criticism of R.A.F. movements.

> There have been many cases of gallantry and devotion on the part of individual officers and airmen (he wrote) but there have also been instances where aerodromes appear to have been abandoned in a state of approaching panic. Stores that will assist the enemy in his further advance have been left behind, material that is urgently required has been abandoned and a general state of chaos has been evident.

In these depressing circumstances the air force in Malaya had a serviceable strength of only 146 aircraft—40 bombers, 34 torpedo bombers, 38 fighters, 17 general reconnaissance and 17 miscellaneous.[4] Of these only 74 (including the Glenn Martin and Blenheim bombers which could scarcely be termed "modern") could be regarded as current types and even these were no match for the types the Japanese could bring against them in vastly superior numbers.

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[3] The modifications included removal of wireless masts and rear vision mirrors, the flattening out of gun cowlings and reduction of the size of the gun ports; all in an endeavour to reduce external air resistance. Very tubes, parachute flare bins and cockpit heaters were removed. The two .5-inch calibre wing guns were replaced with .303 calibre guns. The fuel and ammunition capacity was reduced. In this way the loading of the aircraft was lessened by 1,000 lb. Tests showed that the Buffalo, so modified, could attain considerably more speed and would even loop. But the fuel continued to run down the overflow pipes along the fuselage under the cockpit to cause serious risk of fire from ignition by the exhaust flames.

[4] When compared with the total at 7th December 1941 (164) this figure does not convey the true extent of the losses. Included in the total of 146 are 24 Dutch Glenn Martin bombers, 9 Dutch Buffaloes, 6 Wirraways, 5 Albacores, 4 Swordfish and 4 Sharks—52 in all—which were not included in the total as at 7th December. Additionally many replacement aircraft had been destroyed by enemy action. Nor, of course, was the combat efficiency of the aircraft then available nearly as high as at the outbreak of war.

The order of battle on Christmas Eve is shown in the accompanying table.

	Unit	Serviceable Aircraft	Base
Bomber squadrons			
Blenheims	No. 34 Squadron RAF	10	Tengah
	No. 62 Squadron RAF	9	Tengah
Dutch Glenn Martins	Two squadrons	15	Sembawang
Wirraways	One flight	6	Kluang
Torpedo bomber squadrons			
Vildebeestes	No. 36 Squadron RAF	16	Seletar
	No. 100 Squadron RAF	13	,,
Albacores[5]	One flight	5	,,
Fighter squadrons			
Buffaloes	No. 21 Squadron RAAF	—	Reorganising Sembawang
	No. 453 Squadron RAAF	—	
	No. 243 Squadron RAF	15	Kallang
	No. 488 Squadron RNZAF	14	,,
	Dutch squadron	9	,,
Night fighters (Blenheims)	No. 27 Squadron RAF	—	Reorganising Kallang
General Reconnaissance squadrons			
Hudsons	No. 1 Squadron RAAF	5	Sembawang
	No. 8 Squadron RAAF	8	,,
Catalinas	No. 205 Squadron RAF	4	Seletar
Miscellaneous			
No. 4 Anti-Aircraft Cooperation Unit			
(Swordfish)	One flight	4	Tengah
(Sharks)	One flight	4	,,
Malayan Volunteer Air Force	Reconnaissance flight	—	Kahang
Malayan Volunteer Air Force	Communications flight	—	,,
Dutch	One squadron	9	Pakanbaru (Sumatra)

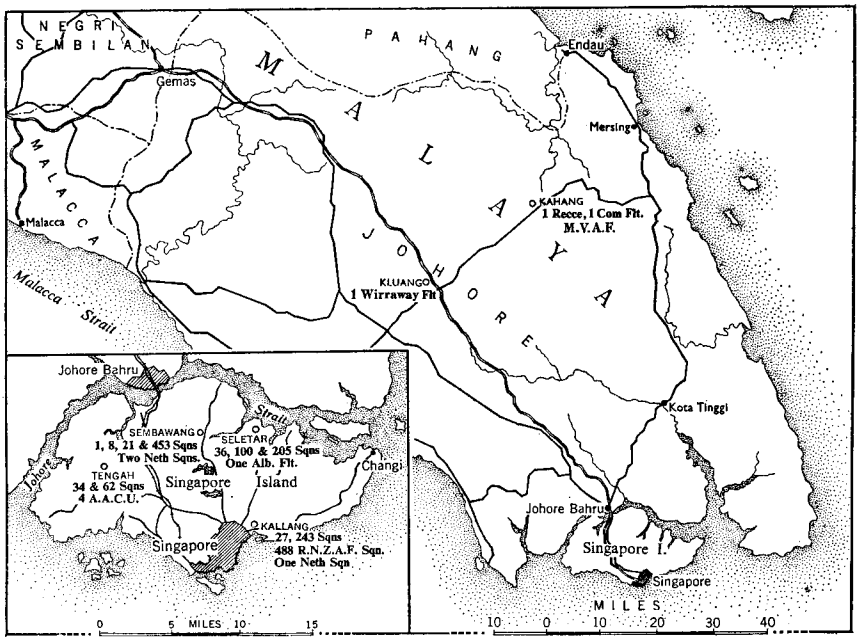
The Australian Hudson squadrons, with the aid of the Catalinas of No. 205 Squadron, were now responsible for reconnaissance off the east coast and in the triangular sector between Singapore, the Natuna Islands and Banka Island.[6] But the long sorties were severely over-taxing their few aircraft. Spare parts were few and valuable operational equipment had been lost in northern Malaya.[7] At one stage in this phase of operations the two squadrons were reduced to only six serviceable aircraft between them. To relieve this shortage 12 officers had left Singapore by Qantas flying-boat on 19th December for Darwin to take delivery of eight replacement Hudsons which had been taken from No. 6 Squadron then based

[5] These aircraft, which had been taken over from the British Navy, were perhaps the best British torpedo bombers available to the RAF at this time. They represented a considerable improvement on the out-moded Vildebeestes, but were too few in number to provide an effective striking force.

[6] Early in this period 205 Squadron lost three of the Catalinas, one on patrol and two when enemy fighters attacked them at their moorings off Seletar.

[7] Codes, maps, charts and instruments were so scarce that they were held in the operations room, issued to the crews at the briefing and returned when the crews came in again for interrogation.

at Richmond, New South Wales, a form of cannibalism which the R.A.A.F. could not well afford. By Christmas Day they had all reached Sembawang, now the busiest airfield on Singapore Island. In addition to the remnants of No. 21/453 Squadron and the Hudson units, the two Dutch Glenn Martin squadrons were based there. Group Captain McCauley, adding the knowledge he had gained from his visit to the Middle East to that acquired from three weeks of war against the Japanese, revised the airfield's defence organisation and arranged better dispersal for aircraft, stores and barracks



Far East Command R.A.F., 24th December 1941

areas, by cutting roads into the surrounding rubber plantations. The Dutch squadrons were responsible for patrolling the west coast of Malaya, sorties which had become increasingly important because the Japanese were now seriously infiltrating the western flank of the British ground forces by moving south along the coast in small craft to points below the British positions and then either landing or moving inland by one or other of the waterways.

The possibility that the Japanese might divert a portion of their forces to Sumatra also worried G.H.Q. To keep watch against this, a Dutch squadron of Glenn Martins had been moved to Pakanbaru, in central Sumatra, whence, from 15th December, they conducted regular searches. Soon afterwards three R.A.F. staff officers were sent to direct the preparation of facilities for the transit of reinforcement aircraft, for the operation

of bombers from Sumatran bases, and to select a headquarters for a bomber group. This movement was aided by transport aircraft of the Dutch Army Air Service which provided practically the only aircraft of this type ever available to Far East Headquarters.[8] On 22nd December a maintenance unit was also sent to Java.

As with the air force, so with the army, the tactics imposed on the land force commanders continued to be withdrawal in an endeavour to consolidate battle positions. The evacuation of Penang Island had been undertaken on the night of 16th-17th December as planned. Though the garrison's demolition parties did their best there were two notable exceptions—the broadcasting station and a fleet of small craft in the harbour were left undamaged.[9] Ships were not available to move the Asian population and, even if they had been, Singapore, already overcrowded, had neither accommodation nor food for them. The centre of gravity of the enemy's advance was now in north Perak. Far East Command was concentrating on the retention of the airfields in central Malaya and, since the air force was too weak to mount any effective assaults on the enemy ground forces, the burden for this fell chiefly on the army. Percival has recorded that he held the view at this stage that the first step to recovery of any kind was to regain control in the air which could be done only with more fighters. To get these he was prepared to make almost any sacrifices.[1] But no sacrifice he could make could hasten the arrival of air reinforcements. Further illustration of the weakness of the British situation came on 20th December when air photographs showed 50 enemy fighters on Sungei Patani airfield. Blenheim bombers from Singapore tried to attack them but failed in bad weather. From 23rd December, the day on which the last squadron had left the mainland, the Japanese began to attack the British ground troops with low-flying fighters. Withdrawal of the 11th Indian Division behind the Perak River was the next defensive move. Meanwhile Percival was looking to the 9th Indian Division to continue to deny Kuantan airfield to the Japanese and to guard the flank of his main forces.

The Japanese were continuing to infiltrate down the coast towards Kuantan and there was the danger that they might land a considerable force in the Mersing-Endau area. The two A.I.F. brigades had been held in Johore to guard against this and on 15th December a flight of aircraft of the Malayan Volunteer Air Force was sent to Kluang to give the Australian commander the benefit of air reconnaissance along the coast. Farther north the Indian troops were falling back and by 22nd December they had withdrawn entirely from Kelantan State.

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[8] Qantas Empire Airways continued to operate their unarmed and vulnerable flying-boats and found much to do in evacuating civilians, chiefly the wives and children of European residents, to Java.

[9] A demolition party returned later and tried to destroy these craft but without success. Twenty-four self-propelled vessels and a number of large junks and barges were thus available to the Japanese to whom they were invaluable for their amphibious operations down the west coast.

[1] Percival, *The War in Malaya*, p. 153.

A raiding party of selected A.I.F. troops known as Roseforce went into action about this time. Formed to operate against enemy communications west of the Perak River, its first operation was a night landing on the west coast and the ambushing of some Japanese vehicles. Attempts to repeat the success of this raid were checked by Japanese air attacks in which the depot ship for the force, H.M.S. *Kudat,* was bombed and sunk at Port Swettenham and five fast coastal boats making their way up the coast to reinforce the flotilla were attacked and sunk or disabled. Thereafter British amphibious operations along the coast became impracticable. The enemy's southward drive continued. By 28th December the defenders had withdrawn to the south of Ipoh and were forming in an effort to withstand the Japanese pressure in the Kampar area. The previous night a mixed force of Blenheims from No. 34 Squadron and Hudsons from No. 8 struck at Sungei Patani where air reconnaissance showed 105 enemy aircraft on the ground—about equal numbers of fighters and bombers. Air photographs later showed that at least seven fighters had been destroyed and five fighters and three bombers damaged.

The 27th December marked the end of Air Chief Marshal Brooke-Popham's service as Commander-in-Chief Far East. The term of his appointment had been decided before the war and, in keeping with that decision, his successor, Lieut-General Sir Henry Pownall,[2] arrived to take over the command. Another change in command was caused by the transfer of the headquarters of the Eastern Fleet to Batavia. Thus Admiral Sir Geoffrey Layton left the great naval base which could no longer be useful to British sea power while Japanese sea and air power remained dominant. Rear-Admiral Spooner[3] remained at Singapore as senior naval officer.

Preoccupied with preparations for the reception of the vital reinforcement convoys, Far East Command, on 27th December, issued an instruction that "air protection for convoys bringing reinforcements will now take precedence before other tasks". To play its part the air force maintained wide sweeps over the South China Sea—undertaken chiefly by the two Australian Hudson squadrons—and arranged for fighter escort for the final approach to Singapore, while the hazardous route through Banka Strait off eastern Sumatra was to be patrolled by a Dutch fighter squadron which moved from Kallang to Palembang on 29th December. By this date enemy air strength over the Strait of Malacca put an end to Allied shipping operations in this narrow stretch of water.

That night the Japanese bombers renewed their attacks on Singapore. This raid was the first of a series of night attacks which added to the losses and general discomfort of the defenders and seemed to presage a

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[2] Lt-Gen Sir Henry Pownall, KCB, KBE, DSO, MC. CGS BEF 1939-40, Vice CIGS 1941, C-in-C Far East 1941-42, Chief of Staff ABDACOM 1942; GOC Ceylon 1942-43; Chief of Staff Supreme Allied Comdr SEAC 1943-44. Regular soldier; b. 19 Nov 1887.

[3] Rear-Adm E. J. Spooner, DSO; RN. (HMS *Calliope* 1916-18.) Comd HMS *Vindictive* 1937-38, HMS *Repulse* 1938-40; Rear-Admiral Malaya 1941. B. 22 Aug 1887. Died while marooned on Tjebier Island, near Sumatra, 15 Apr 1942.

still more desperate situation.[4] On 30th December martial law was proclaimed in Singapore. In the long wooden building in Sime Road, which served as the Combined Operations Room, work went on continually whether the bombers were overhead or not. There was a bomb-blast embankment on the road frontage, otherwise the building was completely vulnerable. Slit trenches had been provided outside, but few were free to use them and fewer still did so; the burden of work at this critical time was intense. The thoughts of all were turned towards the sea, the only path along which substantial reinforcements could come.

This whole problem of reinforcements for the Far East had, of course, a major influence on the defence of Burma. Here was the only route through which the Chinese armies could be supplied, the only effective buffer against an attempt to cross India's eastern land frontier, and an important safeguard against Japanese air attacks on Calcutta and the industrial centres in north-eastern India. Malaya, in her present plight, was being given reinforcements that otherwise would be available to Burma while at the same time that very plight quickened the prospect of a full-scale Japanese attack on Burma.

Control of the R.A.F. in Burma had passed to the Commander-in-Chief in India on 12th December and what had been known as "Burgroup" now reverted to its pre-war title of No. 221 Group. The entire air strength available to the group at this time was No. 67 Squadron with 16 Buffaloes, No. 60 Squadron which had no aircraft, and a communication flight of the Burma Volunteer Air Force with a few Moth-type aircraft.[5] With No. 3 Squadron of the American Volunteer Group, which had 16 P-40B's (Tomahawks), this tiny force shared the immense task of trying to maintain a line of airfields along a "front" about 800 miles long.

Between this line and the enemy air bases in Thailand lay mountainous jungle country which practically forbade any effective communications. For air raid warnings there was, in all Burma, only one radar station—and that in poor condition—to supplement a chain of visual observer posts linked by a telephone system also of dubious efficiency. Airfield development, a credit to Group Captain Manning's energy and the construction work directed by the Government of Burma, provided excellent all-weather runways capable of taking heavy bombers; runways ready for the urgently needed squadrons that still were no more tangible than promises on paper.

The Commander-in-Chief, India, General Wavell, visited Rangoon on 21st December in company with Major-General Brett. Hitherto Wavell had thought, as he wrote later, that he had "ample forces in sight for the defence of Burma". His discussions that day in Rangoon showed

[4] One effect of these raids was to drive a large number of native labourers away from the airfields. The Japanese propaganda was efficient. It announced in advance the exact times of the raids and proclaimed a safety zone in Johore. By the night of 1st January 1942, fewer than 20 per cent remained of the natives who had been working on the four air force stations on Singapore Island.

[5] No. 60 Squadron, which had been engaged in operational training in Malaya, was sent back to Burma about this time by BOAC transport aircraft, after handing over its bombers to No. 62 Squadron.

him how wrong this was. Next day he sent a telegram to London emphasising the weakness of Burma's defences, the lack of an Intelligence system and the need for air reinforcements. "I said that the *immediate* requirements of Burma were two bomber and two modern fighter squadrons, a divisional headquarters and two brigade groups, apparatus for a warning system and anti-aircraft artillery."[6] Sir Reginald Dorman-Smith added his own plea in a telegram on the same day to the Secretary of State for Burma, saying: "Wavell seems to be faced by a situation where there is no plan and darned little with which to carry it out," adding, "but before we can do much we must have 'air'."

As though the words in these telegrams required proof, about 60 enemy bombers and 20 fighters attacked Rangoon on 23rd December. The main bombing force concentrated on the city and docks but one formation of bombers and later some fighters attacked Mingaladon airfield. As in practically every city experiencing its first bombing, the curiosity of the civilian population cost heavy casualties; on this day in Rangoon they numbered about 2,000 about one half of whom were killed. The Buffaloes of No. 67 Squadron, piloted largely by New Zealanders and Australians, and the A.V.G's Tomahawks intercepted the enemy. At least 12 Japanese aircraft were known to have been destroyed and several others probably destroyed. No. 67 Squadron accounted for 6 of these and for 3 "probables" without loss, while the A.V.G. also claimed 6 destroyed for the loss of 2 of their pilots.

Flight Lieutenant Burlinson, whose diary has already been quoted, and who, posted to No. 221 Group, reached Rangoon on 9th December, later described the scene at Mingaladon airfield as "a devil of a mess". The commanding officer, Wing Commander Rutter,[7] had just reached the operations room to give the warning that the enemy were overhead when a bomb exploded. It broke the ridge beam exactly half way down the building. Rutter "pulled his head out, shook himself, and went on with his job". Casualties in the operations room were one killed and several wounded but the total for the base was about 30, 17 of whom were killed. Damage was considerable and the whole station was disorganised and remained so for some time.

A day's respite followed and then, on Christmas Day, Rangoon received its second raid, this time by about 40 bombers and 80 fighters. They came, in Chennault's words, "to finish off Rangoon". But the Allied fighters—24 of them—were airborne and waiting. The enemy achieved comparatively little with their bombing except to intensify the civilian evacuation, and they paid a heavy price for that. Precise details of the combat are not available. R.A.F. reports showed that at least 27 of the attacking aircraft were destroyed, 21 of them being credited to the A.V.G. squadron for the loss of only two of their own aircraft, the pilots

[6] A. P. Wavell, *Operations in Burma from 15th December 1941 to 20th May 1942*, para 9.

[7] Air Cmdre N. C. S. Rutter, CBE; RAF. Comd 4 AACU 1941, RAF Stn Mingaladon 1941-42; AHQ India 1942; comd 301 MU (India) 1942-45; HQ Bomber Cd 1945. Regular air force offr; b. West Derby, Eng, 9 Jun 1909.

of which were safe. Four of No. 67 Squadron's pilots were killed in the battle. "Having no reserve of machines," Dorman-Smith wrote next day, "it looks rather like being a Little Nigger Boy story." Only 11 of the 16 Tomahawks of No. 3 Squadron of the A.V.G. were now serviceable. Chennault ordered his No. 2 Squadron to prepare to relieve it.

On 18th December Nos. 1 and 2 Squadrons of the A.V.G. had moved to Kunming, leaving Toungoo in the afternoon, refuelling at Lashio, and landing at their new base that evening. No. 3 Squadron remained at Mingaladon. By dawn next day 34 Tomahawks were ready for combat with a fighter control headquarters linked to the Yunnan warning set and to the Chinese code service that monitored Japanese operational radio transmission and tapped the enemy's signals. Though it lacked much, the A.V.G. had a mobility that was worth a great deal. It could move 650 miles in an afternoon (using transport aircraft of China National Aircraft Corporation), or 1,000 miles in 24 hours, and be ready for immediate action. The day after their arrival at Kunming the A.V.G. pilots went into combat. Three of ten Japanese bombers, all of which jettisoned their bombs harmlessly, went down in flames and several were damaged for the loss of only one Tomahawk, the pilot of which escaped with slight injuries. A subsequent report from an enemy source stated that only one of the Japanese bombers got back to its base. The enemy never bombed Kunming again while the A.V.G. were there.

From Rangoon General Wavell, accompanied by General Brett, flew to Chungking to confer with Marshal Chiang Kai-shek. One object of the mission was to ensure that at least one A.V.G. squadron—which Chennault wished to remove to China—remained in Burma for the defence of Rangoon.[8] Another was to obtain the temporary use of some of the Lend-Lease material destined for China which was lying on the docks in the Burmese capital. He received no definite reply to either request though there was subsequent agreement to both. Chiang Kai-shek offered the V and VI Chinese Armies for service in Burma.[9] The conditions the Generalissimo imposed—maintenance of a separate line of communications and insistence that his armies should not be mixed with British troops—conditions which Wavell felt he could not meet, plus the very delicate international problems that would arise from a British command employing Chinese armies on Burmese soil, led Wavell to qualify his acceptance to two divisions of the VI Army and to request that the V Army should be held in reserve in the Kunming area. There he considered it would be

[8] Chennault considered the RAF's raid warning facilities inadequate. "When the RAF indicated that its only attempts to bolster the warning system consisted of providing advanced ground troops with heliographs . . . I fought vigorously to withdraw the AVG from what I considered an unnecessarily exposed position. Only the heavy pressure of the Anglo-American Combined Chiefs of Staff and the Generalissimo prevented me from doing so."—Chennault, *Way of a Fighter*, p. 131. Stevenson stated in his despatch that had the air bases at Toungoo, Heho and Namsang with their satellite airfields been situated in the Irrawaddy Valley instead of the Sittang Valley, warning would have been possible so long as communications between the two valleys remained in Allied control. This fact, he considered, gravely influenced the air campaign. AVM D. F. Stevenson, *Despatch on Air Operations in Burma and the Bay of Bengal covering the period January 1st to May 22nd*, para 10.

[9] A Chinese "army" was approximately equivalent in strength to a British division but with a very much lower scale of equipment.

well placed either to move into Burma or for the defence of Yunnan if the Japanese should drive north from Indo-China against the Burma Road.

On his return flight to Rangoon Wavell reached Mingaladon on Christmas Day just as the Japanese raid began. He ran to a slit-trench, narrowly escaping a bursting bomb. "His dive into the trench," one reporter declared, "was not 'impressive'. It was better. It was talked about by the troops for weeks."[1] From the partial security of that trench the Commander-in-Chief gathered still more evidence of the need for aircraft and anti-aircraft defences with which to fight the war in Burma. The order appointing Wavell as Commander-in-Chief in the South-West Pacific, originating in the Churchill-Roosevelt conversation in Washington, reached him on 30th December. He promptly recommended that Burma should remain the responsibility of the Commander-in-Chief, India, but he was over-ruled because "Marshal Chiang Kai-shek must feel himself connected with the new South-West Pacific Command". Two more weeks of war were to pass before Wavell could actually assume his heavy load.

Though relieved of the responsibility for the defence of Burma, Far East Command still had a worrying problem outside the immediate Malayan scene: the defence of Borneo. The Japanese were certain to strike and the Command knew that when they did there would be little that could be done about it. The truth was that the unconfirmed report of a convoy leaving Saigon on 13th December had been all too well founded. About midnight on the 15th-16th December ten enemy transports with naval escort had anchored off Miri and by daylight a Japanese invasion force landed and proceeded to occupy the airfield and oilfields without opposition. They found the earth well "scorched" for, the Indian Army detachment having already withdrawn, the oilfields staff and demolition parties had done their work thoroughly and had, in fact, left by sea for Kuching only a few hours before the arrival of the Japanese. In bad weather Dutch Glenn Martin bombers from Singkawang II, where one bomber squadron and four fighters were stationed, attacked the enemy ships on the 17th and on the two succeeding days. In that period a destroyer and several landing craft were sunk, but the weight of the opposition was far short of that needed to check the invasion, and it was obvious that Kuching's turn must come soon. It came on the 19th when fifteen enemy bombers struck at the town. Apart from the destruction of a large oil fuel dump the damage was slight. Three days later, leaving a skeleton garrison at Miri, the invasion force sailed for Kuching. While still 150 miles distant they were sighted and reported by a Dutch reconnaissance aircraft. The Glenn Martin bomber crews promptly prepared for a strike but before they took off the enemy's air units struck at them. The Dutch aircraft escaped, but the runway was so severely damaged that the Glenn Martins could not take off with bomb-loads. As the convoy approached Kuching on the evening of 23rd December a Dutch submarine attacked with torpedoes. The sinking of three of the transports and a

[1] Gallagher, *Retreat in the East*, p. 107.

tanker was claimed.[2] On the next night another enemy destroyer was sunk by a Dutch submarine but it, in turn, was sunk in an enemy depth-charge attack. By 24th December, with their airfield no longer serviceable and invasion at hand, the Dutch bomber squadron flew from Singkawang II to Palembang. That evening R.A.F. bombers from Singapore made an ineffective attack on the convoy.

The Kuching garrison had learned of the impending invasion from coastwatchers at 6 p.m. on 23rd December. During that night demolition of the Kuching airfield facilities was carried out as effectively as possible on the order of Air Headquarters, Singapore. At daylight on the 24th twenty landing barges laden with enemy troops moved up the Sarawak River towards the town. Indian troops in a gallant but hopeless action sank seven of these craft and then withdrew with severe loss to their own units. By 4.30 p.m. Kuching had fallen and the Japanese were closing on the airfield. Here again, as in Malaya, a commander was called on to decide whether or not to risk the complete loss of his force in an effort to deny to the enemy an airfield—presumed to have been demolished—that could no longer be used by the Allied air forces. On Christmas Day, after a bitter engagement in which it lost practically the entire strength of two companies, the Indian force succeeded in disengaging from the enemy and withdrawing into Dutch West Borneo. By forced marches in almost incessant rain the battle-worn column numbering about 800 reached Singkawang II airfield on 29th December. Here they joined with the Dutch garrison for a further stand against the Japanese. On the 31st three Blenheim bombers from Singapore flew over and dropped 900 pounds of urgently needed supplies to the Indian troops. The first phase of the war in British Borneo had ended and the Japanese had gained their objective, though at a cost.

On the island of Hong Kong, another of the original military responsibilities of Far East Command that had passed beyond its control, the defenders had been fighting with determination and courage, knowing that no help could reach them. The only British aircraft had been a diminutive unit based on the mainland for target-towing purposes and capable of nothing more than unarmed local reconnaissance. The garrison's commander had pressed for some fighters but none could be spared. Still in hope that they might one day come, a fighter defensive system, including a fighter sector control room and radar stations, had been prepared. It was never developed. The British forces endured persistent bombing and low-level fighter attacks. The skill and daring of the enemy airmen astonished them. Indeed so thoroughly had they absorbed the Western misconception that Japanese airmen were cheap copyists, and their aircraft equally cheap imitations, that they believed that German pilots were leading the enemy squadrons into battle. The irony of this is given a special twist by the fact that the truth was available so very close at hand—in

[2] The US Joint Army-Navy Assessment Committee subsequently confirmed the sinking of two transports only. Japanese records state that four of the six transports were hit by torpedoes and one was sunk.

the bitter air war the Japanese had been waging over China in the previous four years.

Now the Japanese had about 80 aircraft based on Canton with which they battered the island's defences almost incessantly. The military story, one of gallantry and fortitude on the part of the defenders, does not belong to this volume. It ends in an account of desperate street fighting on Christmas Day when a brave force surrendered after having inflicted heavy casualties on the enemy.

CHAPTER 14

AUSTRALIA BECOMES A BASE

IN their statement of strategic geographical needs the American Chiefs of Staff, as we have noted, included the base on Wake Island. The garrison was now being attacked almost daily by aircraft based on Wotje and Kwajalein in the Marshall Islands. An important variation occurred when, on 21st and 22nd December, heavy attacks were made by carrier-based aircraft. Next day a strong Japanese force—this time the enemy was not taking the task lightly—landed on the island. The garrison fought back for a time but, with no prospect of relief, resistance was hopeless, and to avoid needless casualties the commander ordered his force to surrender.

An American naval force commanded by Rear-Admiral Frank J. Fletcher in the carrier *Saratoga* was then on its way to relieve Wake. On the morning of 23rd December it was still about 400 miles distant, and on orders from Pearl Harbour abandoned the attempt.

Two days after the loss of Wake Island the Japanese seized the island of Jolo, in the Sulu Archipelago—a move which put the eastern coast of Borneo and the oil port of Tarakan under immediate threat.

Even in the face of continued reverses in the Philippines, General MacArthur had been maintaining his hope that reinforcements could and would arrive. In recent messages to Washington he had referred to the possibility of making counter-attacks on Formosa, but now his bombing force was about to move to Darwin. Six Flying Fortresses took off on 17th December and 4 more next day. On the 19th the enemy attacked Del Monte with 12 fighters which destroyed 3 B-18's (Digby bombers) that had just landed, but missed the remaining Fortresses that were being loaded under camouflage for the flight to Australia. By 20th December all the surviving heavy bombers—14 of them—and 145 officers and men had been moved to Batchelor.[1]

However urgently MacArthur may have wished to send his heavy bombers against Formosa, he made it clear that his first need was fighter aircraft and bombs for the support of his army. He asked that these should be sent by aircraft carrier. General Brereton also shared these hopes. He listed 10 squadrons of "pursuit" aircraft as the most immediate need and suggested that it would be advantageous to have 200 of these aircraft and 50 dive bombers sent by carrier in addition to the 52 Dauntless dive bombers and 18 fighters that were expected to reach Australia before the end of the month for delivery to the Philippines. The movement of the Flying Fortresses to Darwin he regarded not as a withdrawal of forces but as action "to facilitate maintenance in order that the remaining

[1] Their destination was to be Darwin but the surface of the airfield there was unequal to the weight of Flying Fortresses and so all the bombers were sent on to Batchelor.

planes might be used to the best advantage".[2] The confidence of MacArthur and his air commander was based largely on the high hopes still held in Washington. President Roosevelt had specifically ordered that reinforcements should be sent to the Philippines "with all speed" and MacArthur had been informed on 15th December not only that the strategic importance of the Philippines was fully recognised, but that there would be no wavering in the determination to provide support. Authority had been given already for the dispatch of 65 Fortresses and of 15 LB-30A's (the export version of the Liberator bomber) which had been repossessed from the R.A.F. But, before these could be sent, the loss of Wake Island had closed the trans-Pacific ferry route. Hurried efforts were made, therefore, to develop an alternative route across the Atlantic, Africa and India, so that these aircraft might reach the Philippines.[3]

While this hopeful planning had been going on the enemy forces in the Vigan area had been reinforced. Lieut-General Wainwright, commanding the North Luzon force, unable to deploy his troops in sufficient strength in the narrow terrain between the mountains and the beach, decided to await their advance. He considered that at this stage the only way to deal with the situation was by air attack and the Japanese had seen to it that this was no longer possible. "That was the day I realised, for all time, the futility of trying to fight a war without an Air Force," he wrote later.[4] Under energetic Colonel George and an engineering staff, native labourers had built five earthen runways to the south of Manila, the intention being that these would be available for the Fortresses. To these airfields frustrated pilots without aircraft now went to man and develop their defences as best they could.

Meanwhile the commander of No. 27 Group, Major Davies, secretly briefed 20 selected pilots with whom he left for Australia on the night of 18th December. Their mission, made in three war-worn transport aircraft, was to bring back their long-awaited dive bombers. Under orders from General MacArthur General Clagett accompanied them to organise the air corps units that were expected to arrive at Brisbane in the same convoy. These units were to stay in Australia and assemble aircraft while the remainder of the force and equipment in the convoy went on to the Philippines—or so the Commander-in-Chief hoped.

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[2] *The Brereton Diaries*, p. 55.

[3] The route was from Tampa (Florida) through Trinidad, thence through Belem and Natal (Brazil), across the Atlantic to Accra (Gold Coast) and on to Khartoum, Cairo, Habbaniya, Karachi and thence through India and Ceylon to Bandung, Java. As early as 1939 this route had been considered by the USAAF for ferrying heavy bombers to the Philippines. The Liberators were now sent to MacDill Field near Tampa, to prepare for the flight (most of the Fortresses promised were still in the factory). The first serious delay then occurred. Few of the crews had had any training in long-distance flying or, in fact, in manning four-engined bombers. The urgency was great, and a plea for time to give the crews something like adequate training was agreed to only after appeal to Washington and then very reluctantly. The task of setting up refuelling bases at 12 points on the route was also vast; it entailed the construction of tanks and the sea transport from America of from 500,000 to 1,000,000 gallons of 100 octane fuel at each base (the RAF was now consuming about 90 per cent of the output from the Abadan refineries).

[4] J. M. Wainwright, *General Wainwright's Story* (1946), p. 28.

By 22nd December the enemy's real thrust against MacArthur's forces was no longer in doubt. Between 70 and 80 transports, carrying troops estimated to number 80,000, had entered Lingayen Gulf. These forces landed at Santo Tomas, about 100 miles north-west of Manila. Another strong Japanese force, within 24 hours, had landed at Antimonan, on the east coast of Luzon, about 75 miles from Manila. On the 24th, 18 American fighter aircraft struck at 40 transports in Lopez Bay, southern Luzon, with bombs and gunfire. But no such attack could check the enemy. The small fighter force then resumed reconnaissance operations.

The Japanese advance having now gained momentum, MacArthur ordered the withdrawal of his forces into the Bataan Peninsula. While the main assault on Luzon was taking place, Davao, on the south coast of Mindanao, had been seized by the Japanese who thus gained another valuable base. To attack the enemy forces at Davao 9 Flying Fortresses —the greatest combat force No. 19 Group could then mount—were prepared at their new base at Batchelor. For their 1,500-mile flight extra fuel tanks were placed in the bomb bays which limited the striking power of each aircraft to four 500-lb bombs. Communications between Manila and Batchelor at this time were roundabout, to say the least, and there were long delays between dispatch and receipt which placed a very serious handicap on all operations.[5]

The bombers took off on the morning of 22nd December and it was more than 48 hours after the enemy had landed when they penetrated the overcast and dropped their bombs on the Davao dock area. The Japanese, apparently, were surprised. There was no fighter interception and no anti-aircraft fire but cloud so obscured the target that the result of the attack, which later proved to be negligible, could not be seen. In darkness the Fortresses landed at Del Monte, the crews anxious lest the airfield had already fallen into Japanese hands. They found their American comrades still in possession but learned that only the day before the enemy had attacked with 54 bombers. At 3 a.m. five of the Fortresses—all that were ready and airworthy—took off to attack enemy transports in Lingayen Gulf. Four reached the target to find that "eight rows of transports paralleled the land and, close in, a long line of cruisers and destroyers were bombarding the shore".[6] Again the attack was ineffectual. Enemy fighters prevented the bombing force from landing at San Marcelino as ordered, so they set off on the long flight back to Batchelor where, by 24th December, all 9 aircraft had returned safely.

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[5] "Radio communication between the Philippines and Batchelor Field was primitive, slow and a little like something out of a musical comedy. As Combs described it, an order originating from Headquarters in Manila, or later in Corregidor, would be sent over to the naval station at Cavite which radioed it to a ship out in the harbour at Darwin, which handed it over to a commander in the Navy in his room at a Darwin hotel and he, observing the international courtesies, gave it to the R.A.A.F. who saw that it got to the American Air Officer and, usually, it was handed in to the little tent in which Walsh and Combs had their quarters. . . . Almost never was a message received within twenty-four hours of its origin. In that interval anything could have happened at Del Monte."—Edmonds, *They Fought With What They Had*, p. 179.

[6] Edmonds, p. 184.

While they had been absent 3 other Fortresses had attacked Davao airfield and harbour, but without appreciable results.

On Christmas Eve Brereton received orders from MacArthur to "proceed to the south" with his headquarters to organise advanced operating bases from which to protect the lines of communication, secure bases in Mindanao and support the defence of the Philippines. That night, accompanied by three staff officers, he left in a navy Catalina. He reached Surabaya on Christmas Day. Here, in conference with Rear-Admiral W. A. Glassford, commander of the United States Navy task force, and the Dutch commanders, Brereton agreed that the Flying Fortresses should move immediately from Australia to Malang, 80 miles south of Surabaya, and that his own headquarters should be set up in Surabaya with those of Glassford. He then flew on to Australia reaching Batchelor on 29th December.

Meanwhile, on Luzon, the Japanese invasion was at full flood. On Christmas Day, after Manila had been mercilessly bombed, and as the end of this most fateful month and year drew near, the enemy made still further landings on the Luzon coast. What was left of the air force in the Philippines—between 6,000 and 7,000 officers and men with only 16 Kittyhawks and 4 P-35's that could be classed as fit for combat—had withdrawn into Bataan. The general disorganisation of their headquarters and lack of decisive orders caused great confusion. In these somewhat chaotic circumstances the local air command passed to Colonel George whose mind must have held bitter memories of his bold and urgent pleas for air reinforcements seven months earlier. For the most part the airmen under his command were now to form infantry reserve units while still dreaming of aircraft that never came.

Under pressure from the mounting list of Japanese successes, President Roosevelt's assertion that Australia would be a base of the utmost importance was now becoming fact. First indication of this had come when the American convoy so anxiously awaited in the Philippines, was, on 12th December, redirected to Brisbane, the forces it carried being designated Task Force South Pacific, and the senior officer, Brigadier-General Julian F. Barnes, being named as commander not only of this force but of all American army forces in Australia. But General Barnes' command was brief. On 21st December he was informed that General Brett, who would soon reach Australia, would organise and command all American forces and that, until his arrival, General Clagett, who reached Brisbane on the 22nd, would assume command.[7] Barnes became Clagett's Chief of Staff. The United States Military Attaché, Colonel Van S. Merle-Smith, under instructions from Washington, had made arrangements for the reception of the convoy at Brisbane and for the

[7] In August 1941, Brett had been sent to Britain and the Middle East to study R.A.F. operations and report on the expansion of technical maintenance for American aircraft operated by the R.A.F. He then visited India and China, leaving Chungking on 24th December for India again, and Java for conferences with the British and Dutch Commands before coming to Australia.

assembly of the aircraft it carried.[8] It arrived on the 22nd and on the 23rd the first American formations to come to Australia on a war mission disembarked. Brisbane's Ascot and Doomben racecourses provided their first camp sites while the R.A.A.F. stations at Archerfield and Amberley accommodated the units that would undertake the assembly of American aircraft.[9] But the convoy had been loaded in what, for America, were then still peacetime conditions; there had been no thought of tactical loading, with each ship containing complete units. Thus practically the entire cargo had to be unloaded, and equipment that was to go on by sea was then reloaded into the two fastest ships. With Australian waterside workers working 24 hours a day this task was completed by 28th December, and two days later both ships were at sea again and on course for the Philippines. Only when the assembly of the aircraft from the convoy began was it realised that essential parts for the Dauntless dive bombers (trigger motors, solenoids and mounts for the guns) were missing. None of the dive bombers could be ready for operations until these parts had been ordered from Washington and flown to Australia.[1]

Quite the most urgent American problem in Australia was the provision of adequate base facilities so that the flow of war materials, and particularly aircraft, might reach the Philippines. But by 22nd December cable messages from General Marshall began to reflect doubt that the American units could be sent to the Philippines. While the route across the Atlantic and Africa was being developed both the American Army and Navy were preparing bases on an alternative trans-Pacific route by way of Christmas Island, Canton Island, Samoa, Fiji and New Caledonia. Townsville was selected as the Australian port of entry. The second stage of this route was planned for the passage of short-range aircraft from the east coast of Australia to the Philippines thus: Brisbane, Townsville, Cloncurry, Daly Waters, Darwin, Koepang, Macassar, Balikpapan or Samarinda, Tarakan, and thence to airfields near Del Monte, with an intermediate stop at one or other of several bases on the route from Del Monte to Bataan. The total distance from Brisbane to Bataan by this route was almost 5,000 miles—about 25 hours' flying time for a fighter aircraft. But the loss of Davao had created a very real fear that Del Monte, too, might soon be lost, and that the final section of the route would be cut.

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[8] The convoy consisted of seven transports or cargo vessels and the tender *Niagara,* escorted by the cruiser *Pensacola.* Of a total Air Corps strength of more than 2,000 there were 48 pilots, a number of whom were cadets and almost all of whom still required operational training. As mentioned, in addition to the 52 Dauntless dive bombers of No. 27 Group, there were 18 Kittyhawks. Air force supplies included nearly 7,000,000 rounds of .50 calibre ammunition, more than 5,000 bombs (from 30-lb to 500-lb) and several thousand barrels of aircraft fuel and oil.

[9] United States forces disposed near Brisbane on 30th December 1941 were: Nos. 11, 22, 9 and Headquarters 7 Bomber Squadrons; 88 Reconnaissance Squadron and a variety of ancillary units, the total strength being 198 officers, 6 flying cadets and 1,724 other ranks. Other ships, carrying equipment and aircraft fuel and oil, were diverted to reach Sydney on 28th and 31st December.

[1] In *Global Mission* (1949), p. 290, General Arnold wrote that inexperienced mechanics did not know that the solenoids were in boxes nailed to the insides of the crates, which were burned, solenoids and all.

In establishing their bases in the Commonwealth it was natural that the Americans should endeavour to economise in sea and air transport space by obtaining the greatest possible amount of their needs in Australia. Two obstacles were Australia's own expanding defence needs and a rail transport system in which there were breaks of gauge. It was now that the value of General Brereton's earlier visit began to be really appreciated. On that visit, as we have noted, he had initiated three major projects: establishment of airfields for the trans-Australian ferry route, provision of airfields for the tactical operation and training of members of the U.S.A.A.F., and development of bases for an American air force of, initially, four bombardment groups, four fighter groups and one fighter training centre. When American troops arrived in Australia all three projects had been adopted and months had been saved.

No. 27 Group pilots who had reached Darwin from the Philippines left on 23rd December in a Qantas flying-boat, and on Christmas Eve alighted on the Brisbane River alongside the ships of the American convoy. After all they had endured Brisbane on Christmas Eve "seemed almost like the Promised Land", as one American chronicler has written, adding "and in a way it was to be, for no troops in the world's history ever received a warmer welcome than the Australians offered ours".[2] But these planeless pilots had come for dive bombers that were desperately needed in the Philippines. They had found them, but, in the absence of crucial gun parts, they came under the same shadow that clouded the Malayan scene for the Australian Buffalo pilots.

The first of several Allied staff conferences was held at Amberley on 28th December. American officers accepted responsibility for the assembly of their aircraft but, since these aircraft had to be ferried to Darwin, coordination with the R.A.A.F. was necessary and it was agreed that Group Captain Lachal,[3] at that time commanding No. 3 Service Flying Training School, should assume general supervision. Refuelling depots with adequate supplies were required at Charleville, Cloncurry, Daly Waters and Darwin.[4] On the same day Clagett and Burnett agreed to inaugurate a training program—night flying, dive bombing and air gunnery—for the Dauntless crews at Archerfield and the Kittyhawk pilots at Amberley. This was undertaken by Major Davies with Group Captain Lachal again accepting the responsibility for general supervision. Here was the genesis of a long and important phase of collaboration between the U.S.A.A.F. and the R.A.A.F.

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[2] Edmonds, p. 176.

[3] Air Cmdre L. V. Lachal, CBE. Comd 10 Sqn 1939-40; SASO Southern Area 1940-41; comd 3 SFTS 1941-42, RAAF Stn HQ Amberley and 5 SFTS 1942; Director of Postings 1942-44; SASO 9 Group 1944; AOC Eastern Area 1945. Regular air force offr; of Melbourne; b. Melbourne, 18 May 1904.

[4] The 100-octane fuel still available from the N.E.I. had an aromatic content so high that it would destroy the self-sealing linings of the American fuel tanks. A ship carrying 400,000 gallons of American aircraft fuel had been sunk while on her way to Brisbane and supplies were far short of the pre-war estimate of needs—100,000 gallons. Craven and Cate, *The Army Air Forces in World War II*, Vol I, p. 230.

When Brereton reached Darwin he conferred with Major Combs, then commanding the Fortress formation, and made known his decision, already noted, that the group should move to Malang in Java. In contrast to the pilots of No. 27 Group on arrival at Brisbane, the Flying Fortress crews had little to compensate them for all they had endured. To them "Batchelor Field must have looked like the outpost of a lost world. . . . The stops along the line had sad, lost echoes in their names . . . as all names have in that tortured and irrational land where water and women become the focus of man's existence and his dreams."[5] Their aircraft were not in good condition and the men themselves were weary. Their first task on arrival was to dig weapon pits for protection against air raids, which seemed to give the place a "more familiar look". But the enervating weather—shade temperatures up to 118 degrees and frequent rain—took its toll, and maintenance with no greater facilities than they had had at Del Monte, called for great effort. It was not surprising therefore that the crews and ground staff welcomed Brereton's latest order; Java would be much more in keeping with their idea of a "promised land". Brereton told them that they were going north again to do what they could to hold Java because they were the only air power the Allied nations had in the South Pacific area—perhaps an understandable exaggeration in the circumstances though true only in terms of heavy bombers. With some bitterness he spoke of his efforts to prevent the highly-trained group from being sent to the Philippines without adequate fighter protection. Now, instead of a group, they were barely a squadron.

By 31st December 10 Fortresses had landed on Singasari airfield, six miles from Malang. This was now the full strength of No. 19 Group, which began to prepare for a new phase of combat still with their war-worn aircraft but in high hopes that new aircraft would arrive soon.[6]

General Brett reached Darwin on 31st December. He was met by General Brereton who recorded later that Brett was disappointed to learn that the War Department had specifically excluded the air force from his new command. The two generals left almost immediately for Melbourne, flying by way of Townsville where Brereton renewed his acquaintance with Air Commodore Lukis, the air officer commanding Northern Area, "a dark, husky, energetic man with a keen sense of humour". On New Year's Day Brett conferred in Brisbane with General Clagett, General Barnes and Air Commodore Bladin, then Assistant Chief of the Air Staff. Barnes became Brett's Chief of Staff and Clagett soon returned to the United States. "In spite of his disappointment at not assuming command of the air force" (which Brereton had retained) "General Brett was perfectly splendid," Brereton wrote in his diary, adding, "the whole theme of his conference was ways and means of providing and forwarding air troops and supplies to the Air Force in Java."[7] Next day Brett

[5] Edmonds, p. 177.

[6] Of the four other Fortresses one was withheld at Batchelor because of electrical trouble and the other three required major overhaul.

[7] Brereton, pp. 73-4.

sent a radio message to General Marshall telling him that it would be impossible to undertake much in the way of tactical operations until he had developed an American "establishment" in Australia, including a large air base at Darwin and a supply and repair base at Townsville. Next day he flew to Melbourne where he conferred at length with the Australian Chiefs of Staff. Brett had found common ground with General Wavell on the main principles of Allied strategy and with this agreement as background he presented his conclusions to the Australian defence authorities. He proposed a defensive strategy until such time as sufficient forces could be built up to undertake offensive operations by working from Burma into China and towards Shanghai to acquire advanced bases, by exerting slow pressure through the Netherlands East Indies and Malaya, and by exerting similar pressure from Australia into the islands to the north. On 4th January he ordered the two ships of the original convoy, then on their way to the Philippines, to go to Darwin and discharge all cargo and troops there.

On 3rd January General Marshall received a memorandum from his Assistant Chief of Staff, Brigadier-General Leonard T. Gerow, outlining the operations necessary for the restoration of American control in the Philippines, and concluding that "the forces required for the relief of the Philippines cannot be placed in the Far East Area within the time available". He recommended that "for the present" Allied efforts in the Far East be limited to holding the Malay Barrier, Burma and Australia and to operations projected northward "to provide maximum defense in depth"—a plan that would have received the full approval of the Australian Chiefs of Staff.

Another illustration of the awareness that it was now too late to aid MacArthur by delivering heavy bombers to the Philippines was a decision that all ferrying flights must report to General Brett at Darwin. Thus none of the heavy bombers promised after Roosevelt's assurance of reinforcement "with all speed" was delivered to its original destination.

From those who were aware just how the American forces were now being deployed and were conscious of Japan as the "ever-present" enemy, the plan to defeat Germany first must have demanded great faith in the virtues of the long-term plan. This must have been sharply apparent when it was realised that, whereas the American forces being prepared and dispatched for service in the European theatre were labelled "preparatory and precautionary deployments", the limited reinforcements then being sent to the Pacific were dispatched with the prospect, if not the certainty, of almost immediate combat. Apart from the question whether it was any longer possible to provide even indirect aid for the forces in the Philippines, the island chain between Hawaii and Australia, now becoming increasingly vulnerable, was a matter of concern at the conference at Washington.

New Caledonia provided one example. Australia had been given responsibility for its defence but a practical fact was that if the island

was to be made really secure it was necessary to base a substantial American ground force there. The crucial problem was not so much the provision of men, equipment or aircraft as it was one of providing the ships to transport them. The only course remaining was to revise the size of the convoys which were to carry American forces to Iceland and Northern Ireland. This was done and enough shipping space was squeezed from them to transport 21,800 men, including the ground forces for New Caledonia, and certain air units and aircraft that could be spared immediately.

On 3rd January General Wavell was appointed Supreme Commander of the A.B.D.A. Area (the initials deriving from the four nations concerned in the agreement—American, British, Dutch and Australian) and next day the appointment was publicly announced. That day Brett received a directive from the Combined Chiefs of Staff in Washington designating him Deputy Commander-in-Chief to General Wavell in the ABDA Area ("ABDACOM" as the Command was to be designated).[8] In this capacity he was also to be responsible for maintaining communications and supplies for all American air forces from Australian ports to the Netherlands East Indies. On 5th January, in keeping with earlier instructions, Brett assumed command of the United States Army Forces in Australia (U.S.A.F.I.A.). Brereton, still formally commander of the Far East Air Force, now received a new appointment as commander of all American Air Forces in ABDA Command. He was directed to report to General Wavell for instructions and to operate under his strategic control.

On 9th January, in company with Air Chief Marshal Burnett, Brett and Brereton flew to Batavia to meet Wavell and review the whole command position. Next day Brereton learned that he had been appointed Deputy Chief of the Allied Air Forces in the new command, the Chief being Air Marshal Sir Richard Peirse,[9] R.A.F., who would not arrive for another two or three weeks. It had been agreed between Brett and Brereton that staff duties should not be allowed to interfere with Brereton's task of directing the American Air Force and, after a conversation with Wavell, it was decided that he should serve both as Deputy Air Commander, ABDA Command, and Commander of the American Air Forces.

With the new headquarters at Lembang near Bandung sufficiently advanced for occupation Wavell formally moved in on 15th January and inaugurated ABDA Command. On this day Brereton received still another directive, this time from the War Department, Washington, appointing him Commanding General of all American forces both ground and air in Australia and in the ABDA Area. If he accepted this command he could

[8] The Combined Chiefs of Staff's Committee, set up in Washington during the Allied Conference, was the joint Anglo-American body responsible to President Roosevelt and to Mr Churchill from which General Wavell would receive his instructions. This committee eventually assumed complete responsibility for the coordination of the entire Anglo-American war effort.

[9] Air Chief Marshal Sir Richard Peirse, KCB, DSO, AFC. Dep Chief of Air Staff 1937-40; Vice-Chief of Air Staff 1940; AOC-in-C Bomber Cd 1940-42, India 1942-43; Allied Air C-in-C South-East Asia Cd 1943-44. B. 1892.

not remain on Wavell's staff nor could he retain command of the Far East Air Force. He thereupon asked Wavell to inform the Combined Chiefs of Staff that he preferred to remain on ABDA Command staff and retain command of the American Air Forces and this was accepted in Washington.

In these circumstances Brereton left for Australia with full authority to take such action as was necessary. His first step was to close Far East Air Force Headquarters at Darwin and send his staff to ABDA Command, "transferring the airfields at Darwin and Batchelor (departure points for reinforcements to Java) to ABDA Command Control".[1]

But, from the point of view of both the Supreme Commander and the Australian Government, an important territorial discrepancy had occurred in Wavell's directive.

> It is not clear (the Supreme Commander signalled on 10th January to Australia) . . . whether or not I am responsible for the defence of Port Darwin. Since this defence must depend on control of the Timor Sea, which is in my area, it appears that Port Darwin is my responsibility, but I should like confirmation.

This had already been noted in Australia and the Chiefs of Staff had promptly recommended that Darwin should be included in the ABDA Area. They remarked that Mr Churchill had omitted that port and, in fact, any part of Australia when, in his cable of 3rd January, he had defined the area.[2] Members of the Australian Advisory War Council, on 6th January, had also expressed their concern at the omission and had strongly advocated an Australian voice in all councils on Pacific strategy. Failure to set up any joint body for operations in the Pacific, or to provide for more direct consultation with the Commonwealth than that already contemplated, was a situation the Council was "quite unable to accept".[3]

The United States Chief of Naval Operations, Admiral Ernest J. King, now proposed the formation of another area—the ANZAC Area—which would include the eastern coast of Australia and all New Zealand. A naval force under the strategical direction of the Commander-in-Chief, United States Navy, would cover the eastern and north-eastern approaches to this area in cooperation with the air forces operating in it.

On the specific question whether the defence of Darwin lay within Wavell's command, the Australian War Cabinet and the Advisory War

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[1] Brereton, p. 80.

[2] Churchill had cabled to Curtin (in part): "General Wavell's command area is limited to the fighting zone where active operations are now proceeding. Henceforward it does not include Australia, New Zealand and communications between the United States and Australia, or indeed, any other ocean communications. This does not mean, of course, that those vital regions and communications are to be left without protection so far as our resources admit. In our view the American Navy should assume the responsibility for the communications, including the islands right up to the Australian or New Zealand coast. This is what we are pressing for." W. S. Churchill, *The Second World War*, Vol IV (1951), p. 8.

[3] Three months later the Australian demand for a voice in the making of "Higher" policy was answered. The Pacific War Council, attended by representatives of Great Britain, Australia, China, New Zealand, Canada, the Netherlands and the Philippines, and presided over by President Roosevelt, assembled in Washington on 1st April 1942, for the first of more than 30 meetings.

Council on 20th January approved a recommendation of the Australian Chiefs of Staff that that part of Australia north of a line from Onslow to the south-east corner of the Gulf of Carpentaria should be included in the ABDA Area. This was promptly adopted by the Combined Chiefs of Staff. It was a decision that must have met with American naval approval for Darwin, though 1,200 miles to the east of Surabaya where the United States Asiatic Fleet had its operational base, had become—for lack of a better place—the service base for that fleet.

At Lembang Wavell had now begun a task which Mr Churchill described later as ". . . one which only the highest sense of duty could induce him to accept". "It was almost certain," he added, "that he would have to bear a load of defeat in a scene of confusion."[4] The truth was that every major problem that confronted the British in Malaya, Burma and India, the Americans in the Philippine Islands, the Dutch in the Netherlands East Indies, and the Australians in operations directly to the north of their continent, was now Wavell's direct responsibility. He is reported to have remarked that he had heard of men having to "hold the baby" but that in this command it was "twins"; it would have been correct to have said "quintuplets". Though five Commanders-in-Chief were to serve within his command, Wavell had been charged with the strategical direction of all their forces. The command was constituted to comprise "initially all land and sea areas including general regions of Burma, Malaya, Netherlands East Indies and Philippine Islands. . . ." He was designated "Supreme Commander . . . of all Armed Forces afloat, ashore and in air, of ABDA Governments, which are or will be (*a*) stationed in the area, (*b*) located in Australian territory, when such forces have been allotted by respective governments for service in or in support of the ABDA Area".

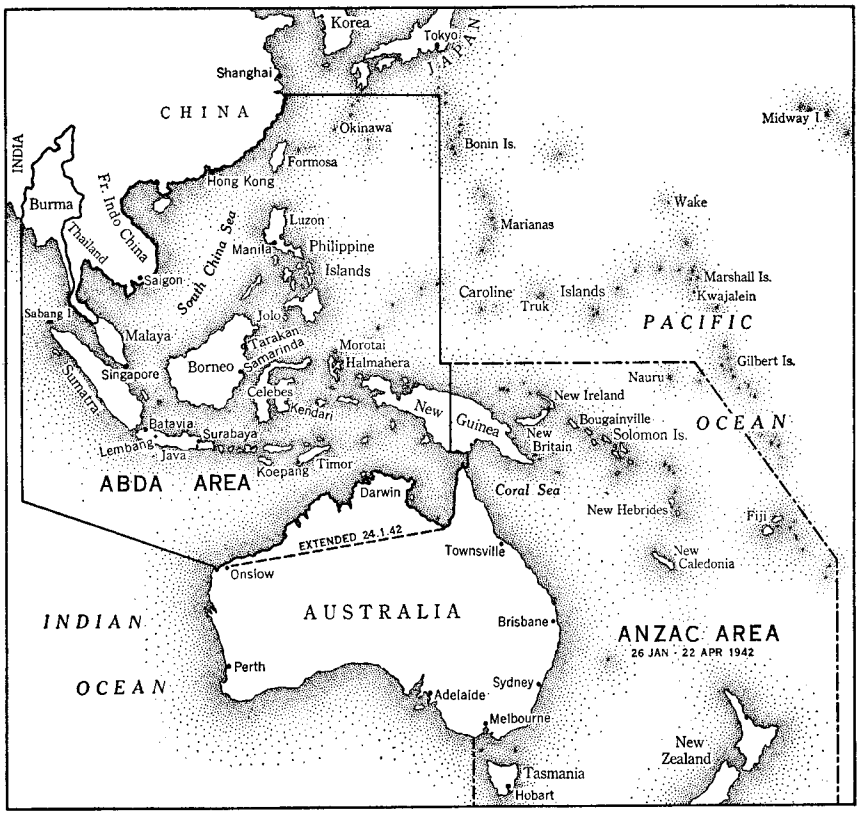
The strategic concept and policy of command, as set out in the directive was, "not only in immediate future to maintain as many key positions as possible, but to take offensive at the earliest opportunity and ultimately to conduct an all-out offensive against Japan". The directive added, "The first essential is to gain general air superiority at the earliest moment through employment of concentrated air power. The piecemeal employment of air forces should be minimised. . . ."

Inclusion of Burma in the ABDA Area was for operational purposes only; administrative control remained with India Command. This was a result of compromise between the British and American viewpoints. The Americans held that since China should have every encouragement to press on with the war against the Japanese, Burma, providing the only supply route to China, should come within ABDA Command. The British view was opposed to divided command in Burma and to American control of communications which were essential to the British forces there.

Simultaneously with Wavell's appointment as Supreme Commander, ABDA Area, General Chiang Kai-shek had been appointed Supreme

[4] Churchill, Vol III, p. 600.

Commander of Allied Land and Air Forces in the China theatre. Eventually it was agreed that an American Army officer would command all United States forces in China and any Chinese forces that might be assigned to him; such of these forces as might operate in Burma would come under Wavell's command. The American commander would also control American supply services to China, including the Burma Road



The ABDA and Anzac Areas

operations and, if need be, and with the authority of the British Command, he would arrange additional bases in Burma and in India to support the Chinese war effort.[5]

ABDA Command's air component, named Abdair, was divided into 6 groups—Norgroup, in Burma; Wesgroup, comprising R.A.F. Far East Command in Malaya, northern Sumatra (including Palembang) and western Borneo; Cengroup, in western Java and southern Sumatra; Easgroup,

[5] Lt-Gen Joseph W. Stilwell took up duty as Chief of Staff to Chiang Kai-shek on 10th March 1942; on 19th March he assumed command of V and VI Chinese Armies in Burma.

in eastern Java and the islands to the east as far as Flores and Celebes (but not the Molucca Sea); Ausgroup in the Darwin area; and Recgroup, which consisted of all seaward reconnaissance units in the command—British, Dutch and American—with headquarters in Java.

The United States Asiatic Fleet, based on Surabaya, had no carriers, but some Catalinas of No. 10 Navy Patrol Wing had come down from the Philippines. Units of the Dutch Navy Air Force also operated Catalinas for air reconnaissance.

Wavell had few illusions about the strength he had available to meet that of the enemy. With the enemy then already established in Penang he did not consider that the air bases in northern Sumatra could be held. He knew that much depended on the capacity of the forces in Malaya to hold the enemy north of Johore until reinforcements arrived. After a second visit to Malaya on 13th January Wavell cabled to the Chiefs of Staff that the battle for Singapore would be "a close run thing".

CHAPTER 15

TOKEN RESISTANCE

AS the only base for the Allied naval forces at the south-eastern end of the Malay barrier, and a main link in both sea and air communications between Australia and the Netherlands East Indies, Malaya, and the Philippines, the strategic and tactical value of Darwin was evident. So far as its air defence was concerned the initial Australian plan had envisaged little more than seaward reconnaissance and, should a Japanese invasion force be reported, delaying and harassing attacks. It had been accepted that the air strength of the base would not be able to withstand a strong and determined attack. But with the arrival of American forces there were increasing hopes that the base might soon be appreciably stronger.

The need for decisive operational control in the area was illustrated on 3rd January when A.C.H., Halong, sought approval from the Central War Room in Melbourne for further air attacks on Tobi Island, the contention being that these might check the enemy's air raids on Sorong and Babo and at the same time provide valuable experience for the Hudson crews. The Dutch members of the A.C.H. staff asked that such raids should be deferred until fighter protection against reprisals could be provided. Northern Area Headquarters in Townsville, presumably expressing the opinion of the Central War Room, replied that fear of reprisal must not be allowed to interfere with offensive action. But it was clear that the difficult question of operational coordination had not been answered—there were no further raids on Tobi Island.

Through the commander of the United States Far East Air Force Headquarters at Darwin, Colonel Francis M. Brady, R.A.A.F. Headquarters on 4th January received a copy of a significant American signal:

> Following from Admiral Hart for General Brereton, repeat Brett and pass to Australian Commonwealth Naval Board. Twelve-plane squadron navy patrol planes scheduled arrive Darwin about 10th January and hope to base them Ambon. Report Ambon however indicates great danger from Japanese menace and without proper fighter support this base must be abandoned soon. When can you furnish planes originally agreed to by Brereton and how many?

The Central War Room already had received a glimpse of the depressed outlook of the Ambon garrisons when, two days before Admiral Hart's message was received, A.C.H., Halong, had sent word that plans existed at both Laha on Ambon and Namlea on Buru for the destruction of fuel and bombs; that at Laha the operations room had been prepared for demolition, but that facilities did not exist for demolishing the surface of the runways.

As though to justify the dismal note of these signals seven enemy flying-boats were over Halong and Laha before dawn on 7th January. Both

bases were bombed and the enemy then flew low and subjected them to gunfire. There was no warning of the raid. Two Hudsons and one Dutch Buffalo were damaged on the ground and Dutch workshops and other buildings were hit. Three natives were killed but there were only minor casualties among the troops. Absence of warning meant that three Dutch Buffaloes, the only fighters available, had not time to take off. There were reports of lights being flashed as signals to the enemy aircraft but, while some of the Ambonese were unsympathetic to the Allied forces and may have served as Japanese agents, proof of these reports was lacking. The inadequacy of the anti-aircraft defences inspired Warrant Officer Knight[1] of No. 13 Squadron to call for volunteers to man a variety of machine-guns, some of which had been salvaged from wrecked aircraft.

With this forewarning of enemy intentions the patrol and reconnaissance operations of the Hudson crews were intensified. On 10th January a Hudson piloted by Squadron Leader Ryland broke off from escorting an American Catalina engaged on a shipping reconnaissance over the Molucca Sea to attack a four-engined enemy flying-boat. The Hudson's gunners had caused some damage to the enemy aircraft when shortage of fuel forced Ryland to give up the attack.

The purpose behind the Japanese raids on Halong and Laha was soon apparent. Late on 10th January reconnaissance aircraft sighted an enemy convoy bearing down on Minahasa, the northern arm of Celebes. The first assessment of this force at A.C.H. was 8 cruisers, 18 destroyers, 12 transports and 3 submarines, but this was shown by later reports to be excessive, the number of transports being, in fact, only 6. An attack that night by Allied Catalinas was unsuccessful, and A.C.H. ordered dawn strikes by the American and Dutch Catalinas, and the Hudsons from Laha and Namlea, and recalled the detached Hudson flight from Babo. When the Allied aircraft set out before first light on 11th January weather conditions were very poor, giving some cover to the enemy force, which was found to have divided, one formation having anchored off Menado to the west of the tip of Minahasa and the other off Kema to the east. Already the Japanese forces had landed. The Catalinas were met by a strong force of Japanese navy float-plane fighters which set upon the slow-flying Allied flying-boats and prevented them from reaching the target. One Dutch Catalina was shot down and two others were damaged. One of the American Catalinas was later reported to have come down on the sea to the south of Kema and a search by another flying-boat failed to find any trace of it or its crew. The Hudsons, with superior speed, penetrated to the target area at both Menado and Kema to make low-level attacks. They scored a direct hit on one cruiser, a near miss on a transport and two more hits on undesignated ships. All the Hudsons returned safely, one of them damaged by anti-aircraft fire. Five Hudsons from Laha then attacked a light cruiser and destroyer, scoring two direct

[1] F-O R. B. Knight, 9179. 13, 11, 80 and 31 Sqns. Clerk; of Middle Park, Vic; b. Warracknabeal, Vic, 26 Jul 1912.

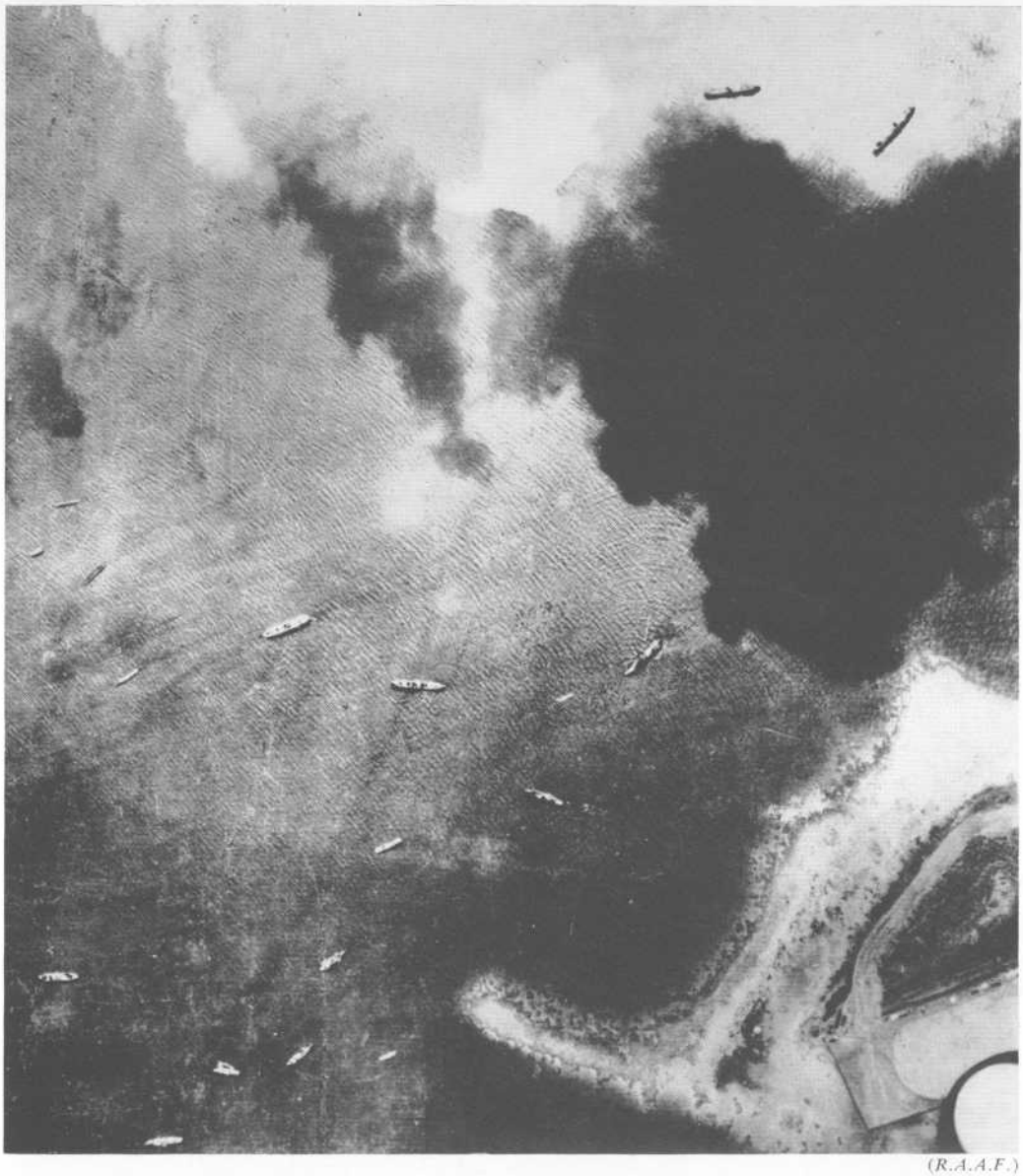


(*Australian War Memorial*)



(*Australian War Memorial*)

Above: Lieut-General George H. Brett, Commander, Allied Air Forces, S.W.P.A., formed on 20th April 1942.
Lower: Gp Capt J. P. J. McCauley, when commanding officer of No. 1 Flying Training School at Point Cook.



(*R.A.A.F.*)

The reconnaissance of Truk on 9th January 1942, by F-Lt R. Yeowart and crew in a specially fitted Hudson Mk IV of No. 6 Squadron. The operation, involving a return flight of 1,405 statute miles, was the longest sea reconnaissance which had been undertaken by the R.A.A.F. in a land-based aircraft. The concentration of enemy shipping and aircraft seen at Truk gave warning of the Japanese thrust south to New Britain and New Ireland in the next two weeks.

hits and three near misses on the cruiser. A destroyer appeared to have been damaged in the previous attack. At Kema, enemy lighters and troops on the beach were attacked with gunfire by some of the Hudson crews. Half an hour later two Hudsons from Laha bombed a 12,000-ton transport and reported several near misses.

When four Hudsons from Namlea bombed another large transport later in the day, without success, they were set upon by Japanese float-planes. The Hudson gunners scored well in this engagement, two enemy aircraft being shot down in flames. A third was seen to go into a spin from 1,000 feet and was counted a "probable" and a fourth was seen to alight on the sea apparently damaged. Credit for this action went to the crews piloted by Flight Lieutenant Hodge[2] and Flying Officer Gorrie,[3] both from No. 2 Squadron. From this exciting encounter the Hudsons returned, each with minor damage from enemy gunfire and one temporarily unserviceable. The only casualty was an air gunner who had been slightly wounded. These crews reported having seen fires burning in the vicinity of Menado and Kema. About this time Japanese seaplanes were reported to be circling Ternate, a Dutch island air base off the west coast of Halmahera. The garrison there feared that this was a preface to invasion, a fear which was supported by a reconnaissance report that enemy ships (type and number not revealed) had been sighted about 60 miles south from Kema and steaming in the direction of Halmahera.

At dawn on 12th January the Allied air attacks on the enemy forces invading Celebes were resumed. On their way to Menado five Hudsons from Namlea were intercepted by three enemy float-planes and five Zeros —the first of these Japanese fighters to be reported in the area. The Zero pilots immediately turned the tables on the Hudson crews. In unequal combat, the details of which were never recorded, the aircraft piloted by Hodge and Gorrie were both shot down from between 6,000 and 10,000 feet. Two other Hudsons, piloted by Flight Lieutenant Sattler[4] and Flight Lieutenant Barton,[5] failed to return and their crews were later listed as "presumed lost". The only aircraft of the flight to return was that piloted by Flight Lieutenant Cuming who reported having seen the Hudsons flown by Hodge and Gorrie shot down. When, half an hour later, those captained by Sattler and Barton had not returned, permission was given to the base operators to break wireless silence in an endeavour to call them up. There was a prompt reply, in good signals procedure, informing the base that the pilots had no message for them. That reply, if in fact it did come from either of the two missing crews, was the last the squadron heard of them.

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[2] F-Lt P. H. R. Hodge, 451; 2 Sqn. Regular airman; of Essendon, Vic; b. Beechworth, Vic, 15 Jun 1913. Killed in action 12 Jan 1942.

[3] F-O P. C. Gorrie, 407168; 2 Sqn. Clerk; of Adelaide; b. Peterborough, SA, 6 Jun 1918. Killed in action 12 Jan 1942.

[4] F-Lt G. Sattler, 260510; 13 Sqn. Salesman; of Bathurst, NSW; b. Newcastle, NSW, 4 Sep 1911. Killed in action 12 Jan 1942.

[5] F-Lt A. R. Barton, 270525. 6 and 13 Sqns. Draftsman; of New Farm, Qld; b. Brisbane, 1 Apr 1913. Killed in action 12 Jan 1942.

Attacks by three Hudsons from Laha on a cruiser which, with a destroyer, was steaming about 30 miles east from Kema were made through a smoke pall drifting out to sea from the fires burning on shore. Two runs were made at 7,500 feet and then a diving attack from 2,000 feet, but without success. Later three more aircraft from the same base reported no success in an attack on a cruiser and destroyer which they sighted 120 miles to the south-west of Ternate.

In the midst of these operations, A.C.H., Halong, on 11th January, sent another warning signal on behalf of Lieut-Colonel Roach, the commander of Gull Force, to the Central War Room in Melbourne. It read:

> For Army Melbourne from Gull Force. Am very disturbed at complete absence of response in view latest position. . . . Can we rely immediate adequate support. If not the result must inevitably be as predicted. We are all completely in the dark and failing any information from your end prospects are gloomy. At present time factor apparently is twelve hours.

Army Headquarters replied that a ship, the *Bantam,* was due at Ambon next day with 1,000,000 rounds of small arms ammunition, 5,000 mortar bombs, one ambulance, two 15-cwt vans, two motor-cycles and rations. The *Bantam* duly arrived.

A summary of the air operations against the Japanese invasion forces in Celebes sent to the Central War Room on 12th January by A.C.H., Halong, began and ended with these cheerless sentences:

> Approach [to target] frustrated by superior air strength and bad visibility. . . . Operations unsatisfactory. Inadequate air strength further depleted and vulnerability to enemy attack greatly increased.

While the Allied air units had been striving to counter the enemy invasion fleet at Menado and Kema the Dutch ground forces there had been offering a hopelessly limited resistance to the Japanese landings which had been made at both points before dawn. But the enemy was taking no chances. In addition to the seaborne forces with which they had to contend, the Dutch were soon faced with even more serious opposition from the air. That same morning the enemy launched their first paratroop attack. More than 300 men descended from transport aircraft over the Langoan airfield, close to Menado. The small Dutch force fought pluckily but could not contain these paratroops who, though scattered over a wide area at first, succeeded in capturing the airfield on which, next day, a further airborne force was landed. The airborne troops soon linked with the forces landed from the sea. The northern Celebes were now securely in the enemy's grasp.

But the invasion of Celebes was only a part of this new Japanese thrust. Simultaneously they made an assault on the oil base on the island of Tarakan. As their convoy of 16 transports with strong air and sea escort closed on Tarakan on 10th January they were detected and attacked by three Flying Fortresses from Malang, but this attack scarcely interrupted their progress. As they approached the Tarakan coast a dense

column of black smoke rising from the oilfields told them that they would not secure that prize intact. That night the convoy lay off shore and before dawn the landing had been achieved. For the next 24 hours the Dutch garrison fought bravely but, as with their comrades in Celebes, the fight was to the strong and next morning they capitulated. The enemy now held two more important bases; bases which brought them more than 300 miles farther south and which enabled them to intersect the Allies' reinforcement route to MacArthur's beleaguered forces in the Philippines.

Knowledge of these enemy successes, together with the loss of four precious Hudsons and their crews and the increasing repair and maintenance difficulties, forced A.C.H., Halong, to decide, on 12th January, that air attacks on distant and strongly-held targets must be discontinued. By concentrating on reconnaissance and on attacking isolated enemy ships it was hoped that a limited air striking force might be conserved to oppose an attack on the Ambon and Buru bases themselves—an attack which the garrisons believed must come soon. The Central War Room in Melbourne and the new Central War Room, now established at Bandung, were both promptly informed of this decision.

Immediately after the capture of Davao and Jolo the *First Air Attack Force,* the main strength of which was the *21st Air Flotilla,* and the *Second Air Attack Force,* chiefly the *23rd Air Flotilla,* were brought down to these two bases respectively. At once they made ready for the "softening-up" raids. Menado was first raided on 24th December, one day after the *21st Flotilla* had arrived at Davao, and the *23rd Flotilla* began attacking Tarakan from Jolo on 30th December, only four days after it arrived. The main invasion forces began to assemble at Davao almost immediately despite "small scale" Allied air attacks by heavy bombers, in one of which the cruiser *Myoko* was "moderately damaged" so that she had to return to Sasebo for repairs.[6] By this time the "air neutralisation" operations had "proceeded smoothly and the tactical opportunity had arrived". The main naval force steamed to a position east of Palau while the Eastern Support Unit moved to the waters east of Mindanao. A submarine force fanned out to the Java Sea to undertake reconnaissance of "the enemy strategic areas", the destruction of the enemy's lines of communications and minelaying off Darwin and in Dundas and Torres Straits. For the Celebes invasion the *Sasebo Combined Special Naval Landing Force* put to sea on 9th January from Davao in six transports with naval escort. Though bombed by Catalinas on the way, it landed soon after midnight of the 10th-11th at Menado and Kema. The troops were "not greatly impeded" by the "sporadic raids" [of the RAAF Hudsons]. Early on the morning of 11th January 334 men of the *1st Paratroop Force* left Davao in 28 transport aircraft. They began dropping on the Langoan air base just before 10 a.m. and had secured the airfield by noon. The supporting airborne force which arrived next day was the *2nd Paratroop Force* of 185 men. Nine fighters also arrived from Davao. (Presumably these included the five Zeros which accounted for the four Hudsons lost in these operations.) The Tarakan invasion force left Davao on 7th January in 16 transports carrying the *56th Regimental Group* and the *2nd Kure Special Naval Landing Force* which landed before dawn on 11th January. Six Japanese mine-

[6] General Brereton later described this attack as "the kind of operation we hoped to perform frequently in support of General MacArthur's forces in Luzon". Nine Fortresses led by Major Combs, made the 1,500-miles flight from Malang, refuelling at Samarinda, Borneo. They bombed from 25,000 feet and believed they sunk a destroyer besides severely damaging a cruiser.

sweepers were engaged by a Dutch shore battery and two of them were sunk. A Japanese minesweeper sank a Dutch sweeper as it was attempting to escape. There were five Allied air raids in the landing period and "a little damage was caused on the ground".

The next signal from A.C.H., Halong, to the Central War Room (dispatched 12th January) read:

Japanese now established Menado and Kema 359 miles from Ambon bases. Anticipate concentrated bombing from flying-boats based Lake Tondana as preliminary to invasion of Ambon. With present equipment Ambon could not resist for one day forces equal to those which took Menado [and] Kema. Again urgently request immediate reinforcement by fighters and dive bombers. Suggest Tomahawks and Wirraways respectively in largest number possible. Repeat only token resistance possible with present unsuitable aircraft all of which will certainly be destroyed in one day's action against carrier-borne forces. Enemy has definite sea control as well as air superiority and therefore present situation far worse than instances such as Crete. Predict Allies' supply line through Torres Strait and Darwin will be cut within week of capture of Ambon.

To this the Central War Room replied on the same day stating simply that the Halong message had been repeated to Bandung, and adding: "We cannot supply aircraft." A day later the commander of Gull Force sent yet another appeal emphasising the impossibility of the position without adequate air and naval support and adding: "I understand no such support can be expected. To avoid purposeless sacrifice of valuable manpower and arms I recommend immediate evacuation combined force." A day later Wing Commander Scott, commanding the air force section at the A.C.H., received a personal signal from the Chief of the Air Staff who explained that he had just read the signal of 12th January setting out the appreciation of the situation by the A.C.H. His delayed knowledge of the contents of this message had been caused by his absence on a visit to Bandung (whither, as mentioned, he had flown on 9th January in company with Generals Brett and Brereton for a conference with General Wavell). Burnett's message said, in part:

The position of Ambon is within the control of the Commander-in-Chief in N.E.I. and must form part of the whole strategical plan and cannot be considered alone. It must therefore be held until orders are received from the Supreme Commander, General Wavell. I feel sure you would be the first to protest if Australians were withdrawn leaving Dutch alone to meet the attack. Congratulate those concerned on good work accomplished.

Scott sent his "respectful acknowledgement" of this personal signal and gave his assurance that resistance with the remaining aircraft would be resolute, adding:

It cannot be anticipated, however, that the enemy can be turned back or even seriously inconvenienced by the Hudsons available. Greatly regret that my [signal] was considered to imply lack of Dutch-Australian solidarity. It is advised emphatically that all objective undertakings will be planned and executed in collaboration with Dutch [and] American officers and that the orders of the Supreme Commander will be implemented by Australians in this area in a manner which will not derogate from their reputation.

Scott's signal was sent on 14th January and it was not until the next day that Wavell formally took over command at ABDA Headquarters, Bandung. For aircraft reinforcements there was only one direction in which Wavell could turn—to the United States, where the utmost that could be done was, in fact, being done. But, as always, it seemed, time was serving the enemy. Plans resulting from the conference at Washington proposed that the strength of the U.S.A.A.F. in the Western Pacific should be two heavy, two medium and one light bomber groups and four fighter groups. And, though deliveries to the ABDA Area could not be maintained as planned—the schedule for the dispatch of six heavy bombers a day proved too exacting—20 Fortresses and 6 Liberators were on their way by 6th January, 45 Fortresses and 9 Liberators were being made ready for take-off and 160 of the same heavy-bomber types were to be sent as rapidly as they came from the factories. But the cry from all the combat areas was for fighters and these could not be flown from America. Thus the best use had to be made of the few that were available and, on the first day of Wavell's new command, a signal from his headquarters informed A.C.H., Darwin, that a detachment of Kittyhawks would be established to operate from Ambon, Kendari and Samarinda as soon as supplies of fuel could be provided and nine protected and camouflaged pens had been made at each of these airfields. ABDA Headquarters would arrange for the fuel supplies and A.C.H., Darwin, was to advise when the pens would be ready.[7]

On the same day North-Eastern Area, for so Northern Area had on this day become, requested R.A.A.F. headquarters to give urgent consideration to the withdrawal of the Hudson aircraft and crews from the Ambon area.[8] This plea was made "in view of losses sustained and probable further heavy losses" and because conservation of general-reconnaissance aircraft and crews was essential. It was recommended that the airfields in the Ambon area should be used as advanced operational bases, only the signals staff, sufficient ground staff for maintenance, and one member of the control staff remaining. The Air Board's reply was simply that the forces at Ambon were under the operational control of General Wavell with whom the situation was under discussion.

Laha, which had neither natural nor artificial camouflage, was the first base to experience the consequence of the increased aircraft range which the Japanese had achieved by their latest thrusts. About 10.30 a.m. on 15th January a single enemy naval fighter was seen overhead at 12,000 feet. One of three Dutch Buffalo pilots who had already earned the praise of their Allied comrades at the base for their tenacity—they could scarcely be induced to leave their aircraft—took off in a vain

[7] It was estimated that even if labour was available for such construction work (which it was not) these pens could not be completed in less than three months.

[8] Operational pressure in the north and in the north-east was now intense and the acute situations at Ambon on the one hand, and Rabaul on the other, were operationally distinct. The Air Board therefore decided that Northern Area should be divided and so, on 15th January, North-Eastern Area was formed with headquarters at Townsville and North-Western Area with headquarters at Darwin.

attempt at interception. The "red" air raid warning had been given and four Hudsons on the airfield and six Catalinas at the Halong flying-boat base all took off.[9] It was the practice among the Hudson crews, if sufficient warning was given, to take off and make for a large and friendly bank of clouds that, almost invariably, hung low about 50 miles from the base. On this occasion 12 Zero fighters swept down on the base in their absence. No serious damage was done but the two Dutch Buffalo pilots who had not taken off earlier now did so to meet the attack. Both aircraft were soon shot down but both pilots baled out safely. The Zeros were engaged by the Allied ground defences including those improvised by members of the R.A.A.F.

The Hudsons were now recalled to base and as they came in to land they were joined by three more Hudsons which had just arrived from Darwin. All had landed except one when the red alert came again. Two of the crews were able to get their aircraft off the ground immediately and the remaining four aircraft began to take off from the one runway simultaneously—two from either end. Despite this unorthodox and chancy procedure all were safely airborne. As they set course for Namlea, and at least temporary safety, 26 enemy aircraft loosed their bombs (126 of them 500-lb, others 25-lb) over the airfield. This attack was quickly followed by the return of the enemy fighters which swept the airfield from low level with their gunfire. All the anti-aircraft defences engaged them and an A.I.F. battery was given credit for shooting down one Zero. The enemy's main target was now the fuel dumps, but a Hudson that was being towed from one revetment to another was destroyed. In addition to this loss and to that of the two Buffaloes, two American Catalinas were destroyed at the flying-boat base at Halong where, though there was excellent camouflage, there were no defences other than a few small-calibre guns. At Laha the Dutch quarters were demolished and the runway was so cratered by bombs that it was unserviceable for 24 hours. There were no R.A.A.F. casualties, a fact which Squadron Leader Ryland attributed to the adequate provision of slit trenches both on the airfield and in the barracks area. In this series of attacks the enemy had now heavily underscored all the pleas that had gone out from the Area Combined Headquarters at Halong.

If the formation of ABDA Command was providing the Australian Chiefs of Staff with some measure of relief from operational responsibility in the Dutch islands to the north, there was no early prospect of such relief in the north-east. Eventually appreciable aid might come from

[9] Warning methods appear to have been very varied in kind and efficiency. At Laha the variation was between the firing of three shots, the explosion of hand grenades on the beach and the firing of a Dutch cannon. Usually the period of warning was between five and ten minutes. At Halong the Dutch had a good system of spotters, stationed along the coast about two miles apart, who relayed warning of the approach of enemy aircraft with flag or lamp signals. These warnings enabled aircraft to take off on many occasions before the attack began. Namlea received warnings from Laha by wireless telegraphy. This was supplemented by an elementary but effective local system in which a Dutch soldier spotted from a hill to the north-west of the airfield and gave visual signals to another soldier at the runway.

the United States Pacific Fleet, but Admiral Chester Nimitz, who had assumed command of this fleet on 31st December, had a grave task before him. This task had two aspects of virtually equal importance—to safeguard the strategic triangle, Hawaii-Johnston Island-Midway Island, and to maintain the vital communications line between the United States, New Zealand and Australia through Samoa and Fiji. There were reports that the enemy was building up strength in the Gilbert Islands, particularly air strength. Bombers had struck at Nauru and Ocean Islands and Japanese submarines had fired shells into the United States bases on Johnston and Palmyra Islands. Not only was the American strength in capital ships depleted as a result of the Pearl Harbour attack, but the air strength in Hawaii was now described as "dangerously weak". In these circumstances the Australian Chiefs could see no near prospect of "outside" aid in their task of holding the enemy off the crucial island arc radiating eastward from New Guinea with Rabaul as its focal point. And Rabaul, admittedly pathetically weak in its defences, had small prospect of withstanding any serious enemy attack. A major disability was, of course, the impoverished state of the R.A.A.F. in operational aircraft.[2] An appreciation prepared early in January by Wing Commander Garing,[3] senior air staff officer at what then were Northern Area Headquarters, indirectly emphasised this unhappy fact by setting out the most important courses of action "open to" the R.A.A.F. in this area. These were:

To strike at Japanese bases and shipping wherever possible.

To obtain such warning as is possible of any attempted southward movements by the Japanese throughout the island area.

To keep open the shipping routes through the Coral, Arafura and Timor Seas.

To deny the enemy access to Rabaul and to the territories of New Guinea, Papua and the mainland of Australia.

These courses of action had in them something of the counsel of perfection which, to the commanders of operational units, and particularly to Wing Commander Lerew with his handful of aircraft in Rabaul, must also have had something of the quality of fiction. With the appreciation there were specific directions for the use of No. 24 Squadron's aircraft. The two Wirraway flights were to be kept dispersed in the Rabaul area (though there was yet no proper provision for dispersal) for the primary task of defending Rabaul itself. The squadron's single and hard-worked flight of Hudsons was to be operated from Port Moresby, Salamaua, Lae, Rabaul and Kavieng for seaward reconnaissance, photo-reconnaissance over enemy and enemy-occupied territory, the bombardment of enemy bases, and as an air striking force—an immense responsibility for a

[2] On 1st January 1942 Nos. 11 and 20 Squadrons each had 6 Catalinas and 2 Empire flying-boats on strength and 269 officers and other ranks between them. The strength at Station Headquarters, Port Moresby, numbered 594. On 3rd January the disposition of the serviceable Catalinas was: Tulagi 2, Port Moresby 4; Vila, Rabaul, Noumea and Soraken, one each. At Rabaul on this date No. 24 Squadron had only 4 Hudsons and 6 Wirraways and approximately 130 officers and other ranks.

[3] Air Cmdre W. H. Garing, CBE, DFC. 10 Sqn; SASO Northern Cd and North-Eastern Area 1941-42; comd 9 Gp 1942-43, 1 OTU 1943-44; Director of Tactics and Operational Requirements 1944-45. Regular air force offr; of Melbourne; b. Corryong, Vic, 26 Jul 1910.

few aircraft which could not operate as far as the Caroline Islands without long-range fuel tanks which, in turn, would greatly reduce their bomb-load.

On New Year's Day Lerew led the four Hudsons he then had available —Flight Lieutenants Erwin, Diethelm and Murphy were the captains of the other three aircraft—in an attack on Kapingamarangi Island. The crews observed five direct bomb hits and, as they left the target, a column of thick black smoke was rising to about 10,000 feet suggesting that a fuel store had been hit. The four aircraft returned safely to Rabaul after having been airborne five hours and a half. Two days later three Hudsons led by Lerew, with Diethelm and Flight Lieutenant Paterson piloting the other aircraft, again attacked this island. The take-off was at 1.35 a.m. and the Hudsons were over the target at 4.30. Two of them made low-level runs over slipways and waterside installations, starting four separate fires with their 250-lb general-purpose bombs. The third Hudson bombed the centre of the island, increasing the intensity of a large fire that had been started in a stores dump during the earlier attack. Again, on 6th January, crews captained by Lerew and Paterson made another strike on the island, the observed result being the destruction of a seaplane on a slipway.

While these operations were proceeding, Intelligence information filtering into the Central War Room in Melbourne pointed clearly to the urgent need to know just what the Japanese were doing at their bases in the Caroline Islands and particularly in Truk, the coral atoll group lying about 650 statute miles due north from Rabaul. An armed photographic reconnaissance was therefore planned. Two Hudson Mark IV aircraft—the latest type—which had just arrived from America, were selected for the task and two Hudson crews from No. 6 Squadron, then based at Richmond, New South Wales, one piloted by Flight Lieutenant Yeowart[4] and the other by Flying Officer Green,[5] were chosen to man them. So important and secret was the mission that the briefing of the crews was undertaken by Air Vice-Marshal Bostock, then Deputy Chief of the Air Staff, assisted by the Director of Naval Intelligence (Commander Long[6]), the R.A.A.F. Director of Intelligence (Wing Commander Packer) and the R.A.A.F. Staff Officer Operations (Squadron Leader Nicoll[7]). It lasted for four days. Yeowart and Green were told that they might have to fight their way into Truk contending with enemy radar direction-finding apparatus and Zeros. Their new aircraft (Yeowart's

[4] Sqn Ldr R. A. Yeowart, 270467. 22, 6 and 32 Sqns; 1 and 7 ADs (Test and Ferry) 1943-45. Accountant; of Brisbane; b. Brisbane, 22 Aug 1915.

[5] Sqn Ldr R. M. Green, 250661. 21, 6, 32 Sqns, 1 PRU and 87 Sqn; Controller HQ Southern and North-Eastern Areas 1942-43; Instructor 1 OTU 1943. Clerk; of Melbourne; b. Melbourne, 26 Dec 1920.

[6] Cdr R. B. M. Long, OBE; RAN. HMAS *Australia* 1917-18. Director of Naval Intelligence 1939-45. B. Princes Hill, Melbourne, 19 Sep 1899. Died 8 Jan 1960.

[7] Gp Capt G. D. Nicoll, DFC, 210. Liaison duties USA 1940-41; SO Operations RAAF HQ 1941; comd 1 GRS 1942, 14 Sqn 1942-43, 8 Sqn 1943-44; LO 10 Gp 1944; comd 1 OTU 1944-45; SO FEAF HQ 1945. Regular air force offr; of Toronto, NSW; b. Toronto, 30 Jan 1918.

already nick-named Tit Willow and Green's Yum Yum), were each fitted with two extra 105-gallon fuel tanks in the cabin and two 20-inch cameras —one in the nose and one in the standard camera well near the door. After the equipment, including the cameras, had been tested in a night flight the Hudsons were flown to Townsville where, on 3rd January, they were given their final orders and their code words—*North Wind*: Proceed on reconnaissance to Truk; *East Wind*: Return to Rabaul; *South Wind*: Return to Townsville direct.

From Townsville, on the morning of 4th January, Yeowart and Green set course for Rabaul direct. When they were near the Trobriand Islands and about one hour's flight from Rabaul they received warning that that base was being bombed. They immediately altered course and landed for refuelling at Lae on the north-east coast of New Guinea. When, eventually, they flew over Rabaul at 5.30 p.m. next day the airfield was closed in by a rain squall so they crossed to Namatanai on New Ireland where there was a landing ground. Though made two years earlier, this runway had rarely, if ever, been used. Palm trunks scattered across it in anticipation of an attempt by Japanese aircraft to land there had to be dragged away hurriedly before the Hudsons, circling in the dusk, their pilots anxiously flashing their landing lights, could come down with safety. That night Rabaul radio could be heard calling for news of the precious Hudsons but no reply could be sent as the aircraft batteries were now too low for transmission.

Next morning the Namatanai district officer, using a pedal transceiver radio set, obtained a weather report after allaying Rabaul's suspicions about the origin of the inquiry. Yeowart and Green then took off and landed their Hudsons at Rabaul at 11 a.m. on 6th January. Lerew was most enthusiastic about their mission, the operational instructions for which ended with the warning that reprisals against Rabaul could be expected. Trouble had developed in one of the engines of Green's aircraft—a carburettor diaphragm had cracked. The damage could not be repaired and Green and his crew were forced to withdraw from the mission. Yeowart and his crew—Flying Officer McDonnell[8] (second pilot), Sergeant Ellis[9] (wireless operator) and Sergeant Marriner[1] (rear gunner)—must undertake the mission alone. Enemy raids on Rabaul were expected with increasing frequency and the risk of losing his aircraft on the ground was such that Yeowart left on the same day for Kavieng on the northern tip of New Ireland where, with the aid of members of the 1st Independent Company and natives, the Hudson was quickly camouflaged with paw-paw trees, complete with fruit on the branches. The precaution was justified. On 7th January an enemy flying-boat, one

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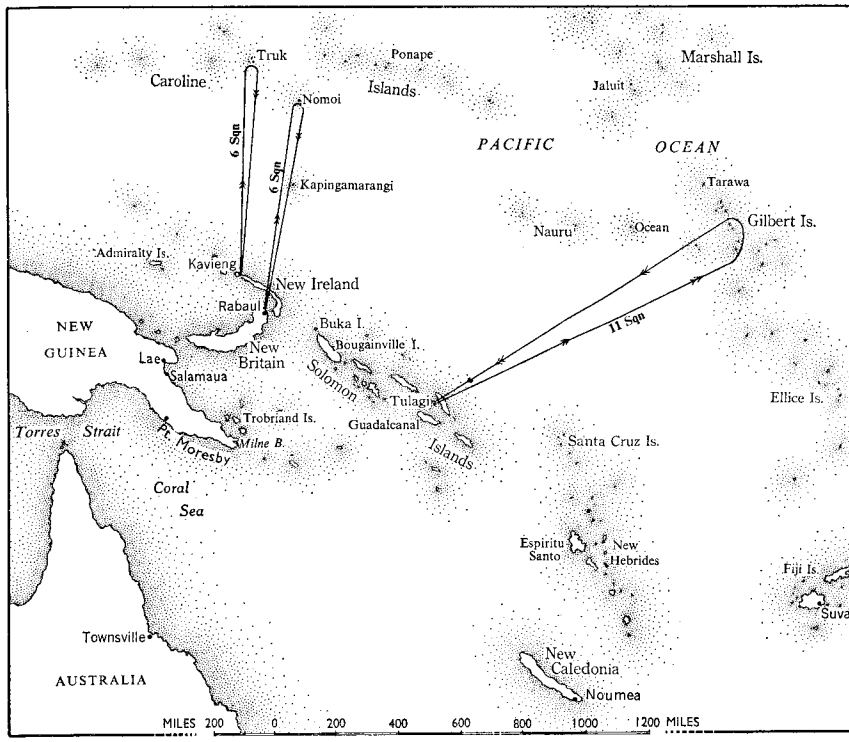
[8] F-Lt P. R. McDonnell, 260545. 6 and 32 Sqns. Commercial pilot; of Manly, NSW; b. Manly, 21 Oct 1918. Killed in action 4 Jul 1942.

[9] Sgt M. C. Ellis, 407360. 6 and 32 Sqns. Shop assistant; of Tanunda, SA; b. Tanunda, 20 Jan 1917. Killed in action 4 Jul 1942.

[1] Sgt F. C. Marriner, 401044. 6 and 24 Sqns. Salesman; of Northcote, Vic; b. Melbourne, 13 Feb 1916. Killed in action 19 Feb 1942.

from a formation that had raided Rabaul, broke off and descended to 5,000 feet to have a close look at Kavieng. Apparently the Hudson was not seen.

Yeowart was disturbed and perplexed when an A.I.F. captain in charge of airfield defence reported to him a conversation he had had that morning with his native "boy". "Massa," the boy had asked, "this fella baloose [aeroplane] come; when other fella come? Two fella baloose land Namatanai. Two fella go longa Rabaul. One fella come here. When



Truk and other long-range reconnaissance operations, January 1942

other fella come?" To this "intelligence" the boy added a further surprise by disclosing that "this fella baloose" had no bombs, but had "plenty camera" and was going to photograph the Japanese—accurate information that was news to the A.I.F. captain. Except that Yeowart had purposely not opened his bomb bay (as was customary when running up an aircraft's engines on a runway) and that this had been remarked on by the observant natives, he could not account for the boy's knowledge. When questioned by army officers about this the boy's unvarying reply was "No savvy".

But Yeowart had little time to speculate on the possibility of espionage. On the night of 8th January he received the signal *North Wind.* At first light next day, with throttles wide open and using the flaps, he took the heavily-laden Hudson off from Kavieng, the undercarriage brushing through tall kunai grass growing on a bank at the end of the runway. It was then 5.44 a.m. Four hours and a half later, just three minutes ahead of the estimated time of arrival over the target area, the Hudson swept from a severe rain squall and the crew were looking down over the starboard wing on Truk Islands. They gazed particularly and excitedly at the main island—Toll.

Lying in Toll Harbour were 12 warships that were either light cruisers or destroyers, one large warship thought to be an aircraft carrier, 3 merchant ships and one hospital ship. Several float-planes were circling low over the harbour in which 8 four-engined flying-boats were moored. An airfield had been built on a small island in the harbour by excavating the centre from a hill and using the earth to build up the reef at either end to form a runway. On this runway about 27 bombers were parked wing-tip to wing-tip. Yeowart made a photographic run over the harbour at 13,000 feet. It was not until this run was half completed that anti-aircraft fire began. Marriner then reported aircraft taking off and climbing towards them, but Yeowart made a second run, this time over the island airfield. The ground fire was becoming accurate as the Hudson swung back over the harbour and, as the leading enemy aircraft began to close in, Marriner opened fire on it with a long burst of tracer, incendiary and armour-piercing ammunition (a combination carried, in part, for its scare value). As he did so he shouted to Yeowart, "For God's sake keep her going!" Yeowart dived the Hudson into the heart of a rain squall which, he said later, was worse than the risk of attack by enemy aircraft. When he levelled off at 500 feet, he had evaded the enemy fighters.

Having spent 25 minutes over the target and completed the task originally allotted to two aircraft, Yeowart set course for Kavieng where he landed without further incident. The tip of the Hudson's tail plane had been shot away, but this was the only damage the enemy had done. From Kavieng Yeowart flew on to Rabaul and landed precariously between recently-made bomb craters on the runway. At 2 a.m. on 10th January Lerew told Yeowart that he had a "hunch" that it would be wise to get the Hudson away from Rabaul immediately. Acting on this advice Yeowart took off from the airfield which, he said later, looked like a seaside amusement park with its red, green and white lights—lights placed to mark the bomb craters and the safe portion of the runway. As dawn broke the Hudson was over Milne Bay, on the south-eastern extremity of New Guinea. Flying safely at 15,000 feet, the crew intercepted an "air raid in progress" signal from Rabaul—Lerew's hunch had been right. When he landed at Townsville Yeowart's films were rushed to a dark-room for developing while he gave a report of his mission to Melbourne by secret telephone. With his crew he then waited anxiously for the

films to be developed, seizing them before they had been properly washed and relaxing only when they were assured that the cameras had not failed.[2]

Lerew accepted the news of the enemy force Yeowart had found lying in Toll Harbour as confirmation of his already firm conviction that Rabaul would soon have to face a major attack. This conviction had developed swiftly since 4th January when 22 Japanese heavy bombers (Type-96 Mitsubishi, code-named "Nell") had swept over Lakunai airfield. Two Wirraways, one flown by Wing Commander Tindal,[3] the armament officer of Northern Area Headquarters who was in Rabaul on a visit of inspection, and the other by Flight Lieutenant Brookes, took off but were unable to gain sufficient height and speed for interception. Flying in three V formations, the enemy "pattern" bombed the airfield from 12,000 feet, loosing more than fifty 60-kilogram (130-lb) bombs. Three bombs fell on the runway and 17 in the native compound and Rapindik Hospital area. The rest fell harmlessly in the sea. About 15 natives were killed and the same number wounded. There could be no question that these raiders had come from Truk and were some of the aircraft Yeowart had seen parked on the runway of the island airfield. About 7 p.m. on the same day 11 Type-97 Kawanisi (Mavis) flying-boats bombed Vunakanau, dropping between 30 and 40 bombs which fell harmlessly some distance from the runway.

Two days later 9 Kawanisi flying-boats again bombed Vunakanau from 12,000 feet. The raid came at 6 p.m. and this time there was practically no warning.[4] This time the enemy scored a direct hit on the new direction-finding station, construction of which was almost complete, wrecking it and the adjacent aerial system and control hut beyond repair. A grounded Wirraway was destroyed, a Hudson damaged and the runway made temporarily unserviceable for other than Wirraways. Four Wirraways took off and despite the lack of warning one of them, flown by Flight Lieutenant Anderson,[5] succeeded in engaging one of the flying-boats. He made a climbing rear attack and closed to within 300 yards. In determined though vain pursuit he fired all his ammunition without apparent damage to the enemy aircraft, which returned his fire from the dorsal gun. Cloud cover for the enemy and failing light prevented any combat from the other Wirraways and the enemy formation got safely away. Though unsuccessful, Anderson had achieved the distinction of being the first fighter pilot to engage in air-to-air combat with a Japanese

[2] As there were then inadequate photographic facilities at RAAF station, Garbutt—the air base for Townsville—the 280 films brought back by Yeowart had to be processed under a security watch at a commercial studio in the town. From an interpretation of these photographs and interrogation of the Hudson crew, P-O J. P. Deverteuil quickly prepared a target map for operations against the Truk base.

[3] W Cdr A. R. Tindal, 76. Comd 24 Sqn 1941, HQ Northern Area 1941-42, HQ North-Western Area 1942. Regular air force offr; of Armidale, NSW; b. Eversley, Eng, 18 Jan 1916. Killed in action 19 Feb 1942.

[4] The coastwatchers in the area—notably Sub-Lt C. L. Page, RANVR, who was stationed on Tabar, due east from Kavieng; Major J. H. McDonald, District Officer at Kavieng; and C. Chambers, who was on Emirau, to the north of Kavieng—observed and signalled the approach of most of the enemy air formations in this period. Feldt, *The Coast Watchers*, p. 41.

[5] F-Lt B. H. Anderson, 260770. 24 and 75 Sqns. Bank clerk; of Sydney; b. Sydney, 24 Oct 1916. Killed in action 22 Mar 1942.

aircraft in the South-West Pacific. This was also the first time that a Wirraway had come within firing distance of an enemy aircraft.

On 7th January Rabaul received its fourth raid. Between 18 and 20 Nells in two V formations with two of their number in the "box" (flying inside the leading V) dropped between 40 and 60 bombs; on the ground a Hudson and two Wirraways were destroyed and two Hudsons were damaged. The barracks at station headquarters, temporary repair hangars, and some stores were also damaged. Three Wirraways took off but they were unequal to the enemy's speed. Later one of the Hudsons that had been damaged—a bomb had exploded almost under its nose, ripping off parts of one wing and the ailerons and tearing holes along the full length of the fuselage—was repaired through the ingenuity of the squadron's engineer officer, Flight Lieutenant Kerr.[6] The wing structure and ailerons were mended with sheet metal and angle-iron. Lerew refused to allow any other pilot to fly this aircraft until he had himself made a test flight in it. His report was: "It can be flown, but that is about all." Later it was safely flown to Townsville.

Next day an enemy aircraft was observed over Rabaul at a height of between 15,000 and 18,000 feet, presumably making a photographic reconnaissance. Japanese reconnaissance was also reported over Buka in the Solomon Islands by a Wirraway pilot who had gone there to obtain a report on the condition of the airfield. A section of the 1st Independent Company stationed at Buka prepared for the demolition of bomb stores and the runway surface if the enemy should attempt to land there.

These costly raids were only one of the factors that multiplied Lerew's problems. Every effort had been made to improve the signals communications. Radio installations had been developed chiefly through the cooperation of Amalgamated Wireless Australasia Ltd which had supplied the transmitters and receivers. Apart from the serious damage to these installations by enemy bombing there was concern over interference with transmission and reception—wireless-telegraph operational wave-lengths were being "jammed" by some outside agency and there was a fear that the single telephone land line on which Lerew had to depend for communication between the airfields and the signals station was being tapped, though an army patrol was unable to verify this. Enemy aliens, chiefly Germans, had not been interned and there were strong suspicions that through them information was reaching the enemy.

On 11th January, Lerew, in a signal to Northern Area and R.A.A.F. Headquarters, made an urgent appeal for labour and equipment for the construction of dispersal and splinter-proof pens for his few and precious aircraft; for four anti-aircraft guns for each airfield; and for six "modern" fighters with which to intercept unescorted enemy bombers.[7] He also

[6] Sqn Ldr A. C. Kerr, 262963. 24 Sqn, HQ Northern Area and North-Eastern Area. Fitter-general; of Balmain, NSW; b. Glasgow, Scotland, 19 Aug 1897.

[7] In a report about this time F-Lt Brookes wrote: "From present experience it would appear that the fire power of the Wirraway aircraft is inadequate to do serious damage to enemy flying-boats which, so far, are the only type of enemy aircraft encountered that can be overtaken by a Wirraway."

emphasised the need for the proclamation of martial law to control the civil population. His concern about the task for which he was held responsible was summed up in the last sentence of this signal: "Loss of Rabaul means loss of offensive." And to protect Rabaul he now had only 12 Wirraways.

The operations instructions for Yeowart's Truk mission had included supplementary orders that, if the photographs revealed satisfactory targets, Northern Area Headquarters were to plan a night-bombing attack by six Catalinas, to be carried out if and when the Central War Room ordered it. On 11th January Yeowart flew the precious target maps to Port Moresby and that same evening he assisted the station commander, Wing Commander Pearce, and Wing Commander Gibson,[8] who was then commanding No. 20 Squadron at Port Moresby, to brief six Catalina crews from Nos. 11 and 20 Squadrons for an attack on Toll Harbour. Three of the Catalinas then flew to Lorengau and three to Kavieng for refuelling after which all six set out to attack the Truk base. After crossing the equator the crews encountered extremely bad weather and for the last 300 miles visibility was reduced to about half a mile. Intermittent fierce thunderstorms made flying conditions still worse. Though five of the Catalinas reached the vicinity of the target, all were forced to return without attacking it.

The Central War Room in Melbourne was now as sure as was Lerew in Rabaul that the enemy force lying in Toll Harbour was preparing for an early thrust south and that Rabaul was almost certainly the next objective. The inability of the six Catalinas to strike meant a serious loss of precious time, but until they could strike nothing could be done for they were the only combat aircraft the R.A.A.F. possessed capable of reaching the target with a reasonable bomb-load. About this time Lerew, aware that American Flying Fortresses were being staged through Australia to Java, signalled an urgent request that these heavy bombers should be diverted for "even one strike" on the enemy naval and air forces at Truk. As he later described it, this target was "a bomb-aimer's dream". However, these Fortresses then had only skeleton crews,[9] and in any event the American view of Japanese intentions, considered in the light of Yeowart's reconnaissance report, was that the enemy's most likely objective was Suva, which would not be reinforced from America until the reinforcement of Samoa had been taken care of. General Brereton, moreover, had made it very clear that he was not to be dissuaded from his concentration on aid for General MacArthur's forces in the Philippines by any request for aid in defence of Australian territory.

On 14th January Yeowart and his crew made a photo-reconnaissance of Nomoi, 120 miles south-east of Truk, which was thought to be a Jap-

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[8] Air Cmdre W. N. Gibson, CBE, DFC, 79. 10 Sqn; comd 20 Sqn 1941-42; RAAF Port Moresby 1942; Director of Operations Allied Air HQ 1942-43; SASO RAAF Cd 1943, 1 TAF 1944-45. Regular air force offr; of North Sydney; b. Sydney, 28 Apr 1915.

[9] Lerew could not have known, of course, that they were manned by scratch crews in at least some of which the navigators were mere cadets.

anese seaplane base. They found no activity there and an attack with gunfire on a Japanese lugger was the crew's only compensation for a long and hazardous flight in which, at 15,000 feet, they experienced temperatures so low that the Hudson shuddered as large pieces of ice were flung against the fuselage from the propellers. A similar reconnaissance of the Gilbert Islands, notable chiefly for its duration—21 hours—was made on 14th-15th January by a Catalina from No. 11 Squadron piloted by Squadron Leader Cohen,[1] who, from Tulagi, covered nine separate islands in the group and took 100 photographs. No enemy naval units or aircraft were sighted and there was no evidence of any new enemy bases there. Had Yeowart, instead, made a second and equally-successful reconnaissance of Truk on this date, he would have brought back still more dramatic news, for by this time two aircraft carriers with escorts and auxiliary vessels and a number of transports were in Toll Harbour and on the point of moving south.

The Catalinas of Nos. 11 and 20 Squadrons were now called on to attempt an attack on the Truk base. The pilots chosen for the operation were Squadron Leaders Price[2] and Davies[3] and Flight Lieutenants Hemsworth,[4] Thompson[5] and Beaumont,[6] and Lieutenant G. H. Hutchinson[7] of the United States Navy, then serving with No. 11 Squadron. On 15th January, Davies, Hutchinson and Beaumont took their aircraft to Kavieng for refuelling while the other three went to Lorengau. In taking off from Kavieng the Catalina piloted by Davies crashed. All the crew and the aircraft were lost. Hutchinson brought his aircraft down at the scene of the crash in a vain attempt to rescue the crew. Beaumont's aircraft, alone of the three, reached the target, which again was obscured by stormy weather. This Catalina reached Truk an hour later than the three from Lorengau and, whereas they had failed to see the base at all, a break in the overcast gave Beaumont and his crew a brief sighting, sufficient for them to make two runs and drop sixteen bombs, though the weather closed in again almost immediately and they were unable to see the result of their attack. All four Catalinas returned to their base, but the luck of the weather was still very definitely with the enemy.

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[1] Gp Capt J. A. Cohen, DFC, 117. 10 Sqn; comd 11 Sqn 1941-42, RAAF Stn Rathmines 1942-43; Deputy Director of Training 1943-44; Senior Intell Offr, HQ RAAF Cd 1945. Regular air force offr; of Coogee, NSW; b. Moree, NSW, 19 Oct 1916. (In 1947 changed name to Richard Kingsland.)

[2] W Cdr T. McB. Price, DFC, 172. 9 Sqn (comd HMAS *Sydney* Detachment) 1939-41; seconded 19, 33 Bombardment Gps USAAF and comd 20 Sqn 1941-42; Deputy Director Operations AAF HQ 1942-43; comd 14 Sqn 1943-44; CFI 1 OTU 1944-45. Regular air force offr; of Adelaide; b. Adelaide, 14 Nov 1914.

[3] Sqn Ldr T. H. Davies, 163. 9 and 11 Sqns. Regular air force offr; of Kensington, NSW; b. Melbourne, 22 Feb 1917. Killed in action 15 Jan 1942.

[4] Sqn Ldr G. E. Hemsworth, AFC, 260275. 11 and 20 Sqns. Commercial pilot; of Manly, NSW; b. 2 Jan 1910. Killed in action 6 May 1942.

[5] W Cdr C. F. Thompson, DFC, 260286. 20 and 11 Sqns; comd 43 Sqn 1943-44; liaison duties 1 TAF 1944-45. Builder's trainee; of Sydney; b. Waverley, NSW, 31 Aug 1916.

[6] Sqn Ldr E. V. Beaumont, 260. 11, 9 and 20 Sqns. Regular air force offr; of Bondi, NSW; b. Sydney, 23 Jan 1918. Killed in action 24 Feb 1942.

[7] Lt Hutchinson was one of a number of Catalina pilots lent to the RAAF by the American Navy's No. 10 Patrol Wing, forced south from the Philippines.

The Japanese operations in this period and in this area were simple enough. A Pacific sequel to the attack on Pearl Harbour was a part of the plan for southern conquest. The *Fourth Fleet* which, with an amphibious force, had seized Guam and Wake Islands, had moved down to the Truk Islands and there was making rendezvous with part of the carrier fleet that had made the assault on Pearl Harbour. Thus augmented, the new task of the *Fourth Fleet* was to provide cover for a force that would make the next strike southward. It was the beginning of the concentration of these forces that Yeowart's reconnaissance mission had detected.

So it was, in mid-January 1942, that with powerful enemy forces poised to strike at Rabaul on the one hand and Ambon on the other, the Australian Chiefs of Staff faced a military situation for which they had no immediate answer. Without the aircraft to strike at the enemy before he struck and to meet his assaults when they came, they were virtually powerless. Those unhappy words signalled from Halong on 12th January —"only token resistance possible with present unsuitable aircraft"—were true of the whole Allied position throughout the Far East and the Western Pacific.

CHAPTER 16

MALAYA CONVOYS: JANUARY 1942

MARTIAL law had been proclaimed when, on New Year's Eve, Singapore was subjected to another night raid. But the exotic city could still cast its spell and in the night clubs and hotels people briefly forgot, or pretended to forget, that the Japanese were so desperately close. Their number, understandably, included men of the fighting Services free to snatch a few hours of relaxation from combat or the other tasks of war. Sirens sounded their warning through the music of dance bands. A band leader would break off to make the announcement: "An enemy air raid is approaching." But the music and the dancing would continue with scarcely a break, even when the sound of anti-aircraft gunfire could be heard, followed by the muffled rumble of bursting bombs in the distance. A few would leave quietly; the others would dance on. "Champagne . . . expensive food . . . immaculate uniforms and bare white shoulders," an Australian flight lieutenant wrote later, adding, "Tonight the Japs are a back number. . . . Tomorrow? . . . We'll think about that, tomorrow."

That "tomorrow"—New Year's Day 1942—brought the first serious air attack on Tengah airfield. Considerable damage was done by the bombing, but one of the most serious results of such raids was the disappearance of the native labourers. That set a problem not only in maintaining the airfield's facilities but in repairing the damage done. And the natives were not only being frightened away; they were being enticed away by cunning enemy radio propaganda that invited them to move to a designated safety area—the Japanese would see to it that no bombs fell there and would tell them the precise time of the next raid.

For the better air defence of the island, Fighter Control Headquarters was expanded and redesignated No. 224 (Fighter) Group, with Group Captain Rice[1] in command. An effort was made, too, to cope with night raids by reorganising No. 27 (Night Fighter) Squadron which now had five serviceable Blenheim I aircraft. But the effort was entirely unsuccessful; a reflection not on the squadron but solely on the incapacity of their outmoded aircraft.

A report that reached Air Headquarters on New Year's Eve from a reconnaissance pilot told of an enemy force in small steamers and towed barges moving down the Perak coast. With the first reinforcement convoy now approaching Singapore Air Vice-Marshal Pulford dared not divert aircraft in any strength from the task of protecting it, a task that demanded shepherding operations by fighters, and reconnaissance sorties by 6 Hudsons, 4 Glenn Martins and 2 Catalinas daily for three days, while all other available combat aircraft remained at the alert ready to strike

[1] Gp Capt E. B. Rice, RAF. (1914-19: 4th Dismounted Rifles, SAF; Lt Royal Dublin Fusiliers; RFC and RAF.) Comd 223 Gp HQ 1941, 224 Gp HQ 1942. Regular air force offr; b. Claremont, Cape of Good Hope, Sth Africa, 5 Jul 1892. Died while a prisoner of war 5 Sep 1943.

should enemy air or naval forces, or both, attack the convoy. On New Year's Day the enemy force on the west coast reached the mouth of the Perak River. One tug, with four barges in tow and all vessels laden with troops, grounded on a sandbank in the river's mouth—a perfect target. The defending troops sent an urgent call for naval and air striking forces. There was no naval force within reach that was capable of effective attack and the aircraft that were sent arrived too late to strike. The tide had risen and the "target" had refloated and disappeared somewhere under the dense jungle overhanging the river.

As the first reinforcement convoy came nearer, the two Australian Hudson squadrons undertook the brunt of the reconnaissance sorties while the combined Australian fighter unit, No. 21/453 Squadron, which by this time had received 16 replacement aircraft, shared in providing the fighter patrols, sending out aircraft, in relays, 6 at a time. Happily this task of watching over 7 merchant ships, with their escort of 5 warships, was performed without enemy interference. The convoy berthed safely on 3rd January.[2]

Further progress by enemy forces down the west coast was accompanied by a strong attack on the main British positions in the Kampar area, but it was the flanking coastal movement that told; a further British withdrawal was forced, this time to the Slim River area where new positions were taken up on 4th January. Japanese air units were now in Ipoh, and this enabled them to reduce the range of their sorties and increase the number. An understanding of the strain placed on the troops of the 11th Indian Division and the communications of the III Indian Corps by almost incessant enemy air attack while they had no direct air support of their own must temper any criticism of their lack of spirit. On the other hand the over-worked air units whose resources were so limited were in no way to blame. "They did their willing best," General Percival wrote later, "and it was no fault of theirs that it was a poor best."[3] The task confronting Air Headquarters was indeed perplexing when Air Vice-Marshal Maltby arrived on 4th January to fill the post of Chief of Staff to the new Commander-in-Chief, General Pownall.[4]

By this time headquarters of both Malaya Command and III Corps were calling urgently for air action against the Japanese forces landing on the west coast and outflanking the British positions. Air Headquarters therefore ordered daily offensive reconnaissance sweeps by from four to six Glenn Martins or Blenheims. At first these were unescorted operations but the loss of four aircraft in one day from enemy fighter attacks forced the Command to provide escort from its own very precious fighter strength. Four Shark aircraft, one of the two flights of No. 4 Anti-Aircraft Cooperation Unit based at Tengah, had been moved to Batu Pahat on the west

[2] This convoy brought the 45th Indian Brigade and a pioneer battalion—all untried and only partially-trained troops.

[3] Percival, *The War in Malaya*, p. 199.

[4] Maltby remained to assist the AOC Far East Command when Pownall became Chief of Staff to Wavell. He was attached to AHQ Singapore on 12th January for that purpose.

coast on 2nd January to bring them within range for such reconnaissance operations. On 2nd, 3rd and 4th January Blenheim crews attacked and damaged enemy barges off Port Swettenham. No definite sinkings were reported.

At this stage General Percival ordered General Heath[5] of III Corps to do his utmost to delay the enemy's advance by flank and rear attacks. It was of the utmost importance, he said, that the airfields at Kuala Lumpur and Port Swettenham should be denied to the Japanese until at least 13th January (when another convoy should be in port). On 2nd and 3rd January enemy attempts to land at Kuala Selangor were repelled, but on the 4th other enemy troops were encountered moving south along the coast track about eight miles to the north. In the Slim River sector the British and Indian troops prepared new positions, working mainly at night because by day Japanese aircraft were almost continually bombing and machine-gunning the jungle flanking the road and the railway, even when they could not see a target. Though they inflicted few casualties, these attacks seriously demoralised the troops. The commander of one Indian battalion, Colonel Deakin,[6] reported that his unit, which had withdrawn 176 miles in three weeks with only three days' rest, and at a cost of 250 casualties, most of whom had been killed, had lost 50 per cent of its fighting efficiency. His men now "seemed to want to do nothing but sit in slit trenches". They complained that they could not sleep because of the enemy air attacks, and the deadly silence on the ground, emphasised by the blanketing effect of the jungle, was getting on their nerves. This silence was broken only by the roar of enemy aircraft engines overhead.

On the day of the arrival of the first convoy two Australian Buffalo pilots, Flying Officer Wallace[7] and Sergeant Harrison,[8] flew to Kuala Lumpur with orders to make a tactical reconnaissance to the south of Ipoh. They found a force of Japanese troops with motor transport moving south and, attacking with low-level gunfire, they caused substantial casualties and damage. Just as Wallace and Harrison were circling to land at Kuala Lumpur for refuelling "the whole runway seemed to erupt" as several sticks of bombs burst on it. The Buffaloes were caught in the turbulence caused by the explosions and, when their aircraft had levelled out again, the pilots saw a formation of 27 enemy bombers sweeping westward at 20,000 feet. Since the runway at Kuala Lumpur was now unserviceable, they flew back to Sembawang, landing there after dark with their fuel tanks practically empty.

Kuala Lumpur was now untenable even as an advanced base, and the maintenance party from No. 21/453 Squadron, which had remained there

[5] Lt-Gen Sir Lewis Heath, KBE, CB, CIE, DSO, MC. GOC 5 Indian Div 1939-41; comd III Indian Corps 1941-42. Regular soldier; b. Poona, India, 23 Nov 1885. Died 10 Jan 1954.

[6] Brig C. C. Deakin, DSO, OBE. GSO1 1 Aust Div 1937-40; comd 5/2 Punjab Bn 1941. Regular soldier; b. Cruck Meole, Shropshire, Eng, 16 July 1896.

[7] Sqn Ldr R. H. Wallace, 586. 21, 21/453, 5 and 30 Sqns. Regular air force offr; of Largs Bay, SA; b. Largs Bay, 12 Jan 1918. Killed in aircraft accident 29 Oct 1944.

[8] F-Lt G. T. Harrison, 407578. 21, 21/453, 23, 84 and 450 Sqns. Shoe designer; of Kensington Gardens, SA; b. Glenelg, SA, 10 Dec 1917.

when all the aircraft had moved to Singapore Island, was ordered to withdraw, undertaking demolition work at Port Swettenham on their way back; they reached Sembawang on 6th January. Before dawn on the same day two other Buffalo pilots, Flight Lieutenant Kirkman and Flying Officer Sheppard, left Sembawang to investigate a report of further enemy barge movements along the Bernam River. After searching for some time they sighted nine barges laden with Japanese troops. It was one of those too rare occasions when the enemy could be paid back in like measure. Kirkman and Sheppard climbed to 2,000 feet, rolled their aircraft over, and dived to blast the troops in the barges with their gunfire. They repeated these tactics until they had spent most of their ammunition. Later, in the mess at Sembawang, Kirkman answered the questions of fellow pilots with the terse comment, "We saw a lot of Japs in the water—dead ones."

But such operations were too few to relieve the 11th Division which was being sorely pressed despite all the efforts of the commanders to develop a tactical situation in which the enemy could be held. After more confused fighting in which the Japanese advance was temporarily stayed the enemy's numbers, fitness for such combat, armament and tactical advantages told again. On 7th January their main column, consisting of tanks with infantry support, smashed through the 11th Division's forward positions; then the tanks drove deeply into the British defence area and continued for 19 miles, sweeping aside all attempts at opposition and reaching a point three miles south of Slim River Bridge, a key position in the British defences. The battle of Slim River was a spectacular success for the Japanese and a disaster for the British forces; the loss of central Malaya was now certain.

Meanwhile, the 9th Indian Division, with the 8th Indian Brigade in the Kuala Lipis-Jerantut area and the 22nd Indian Brigade at Kuantan, had been given a task comparable in purpose with that of the 11th Division at Kuala Lumpur: denial of Kuantan airfield to the enemy, and for the same reasons. These forces might have been effectively used for an operation against the left flank of the main Japanese force by moving along the Jerantut-Raub-Kuala Kubu road but for the over-riding importance of the need to defend the airfield. Something of what Percival has termed the "poor best" of the air force was contributed in an attempt to destroy enemy aircraft on the ground in the Kuantan area on 2nd January. The Gong Kedah airfield had been occupied by the Japanese on New Year's Eve, bringing Kuantan more nearly within their grasp. It was an expression of the weakness of Air Command's striking power that the attack on this airfield should have to be limited to the two remaining Catalinas of No. 205 Squadron R.A.F., reinforced on 7th January by three more. The Catalinas were so vulnerable to enemy fighter attacks that they had been withdrawn from daylight reconnaissance and were being used instead for long-range night attacks; they were the only aircraft available with sufficient range for attacks on such targets as Singora (on which they

made two strikes) and Gong Kedah. An indication of the importance placed on the attack on Gong Kedah lay in Pulford's expressed intention of accompanying one of the crews making the strike. That the Air Officer Commanding should find it necessary to contemplate this was in itself a reflection of the great strain that was imposed upon him. It happened that at the last moment he was prevented from doing so. Two experienced officers of No. 8 Squadron, Flight Lieutenants Bell and Widmer, were selected to fly in the Catalinas as navigators. The strike was made but there is no record of any particular success attending it; nor could so weak a striking force have gained much success.

The *56th Japanese Regiment* which had captured Kota Bharu had made contact with patrols of the 22nd Indian Brigade on 23rd December and by New Year's Eve was investing the Kuantan airfield. On 3rd January, the 22nd Brigade, having lost about one-third of its strength in combat, began to withdraw towards Raub.

An incidental operation at this time was an attack on 8th January by nine Glenn Martins and four Hudsons on an enemy ship anchored in the South China Sea. It was suspected that the vessel was being used as a navigation base for Japanese aircraft flying from Indo-China to Malaya. Direct hits were observed by the attacking crews. Next day nine Glenn Martins bombed enemy ships unloading at Kuantan with "some success". Two days after the 22nd Indian Brigade had withdrawn, the enemy achieved what G.H.Q. had been so anxious to prevent—the occupation of Kuantan airfield. Even before the actual occupation Air Headquarters had ordered all the available strength of No. 21/453 Squadron to prepare for an attack. On 8th January 8 Buffaloes flew to Kluang. After landing in the dusk the aircraft of both Flight Lieutenant Kinninmont and Flying Officer Vanderfield ran into unmarked bomb craters and were damaged. Surprise was essential to the attack which, therefore, had been planned for dawn. There was a final briefing by torchlight next morning and all serviceable Buffaloes were airborne before daylight. As dawn came and the aircraft were circling to pick up formation, there was a cry over the radio-telephone of "Bandit!" and an enemy reconnaissance aircraft swept over at high speed. One Buffalo pilot fired a vain burst of gunfire at it as it disappeared. There was no sign of any other enemy aircraft and the Buffaloes set course for Kuantan only to be recalled by the ground controller because the target had been shut off by torrential rain. The attack was therefore abandoned and the pilots flew disconsolately back to Sembawang.

It was now symptomatic of the whole campaign that the army's initial problem of meeting the enemy's advance from tactically unsound positions so that it might preserve the Malayan airfields for the use of the Allied air units had radically changed. Instead it was fighting from equally unsound tactical positions to deny the enemy each of these airfields in turn for as long as possible. The safety of approaching convoys and of Singapore Island itself also demanded the maximum effort from the Allied air units.

This, in turn, denied air support to the army in its urgent task; and, if the army failed to hold the airfields, the enemy would be able to mount air attacks in such strength that they might be able both to smash the convoys before they had discharged their urgently needed cargoes and to make the airfields on Singapore Island untenable to the Allied air units. G.H.Q. were thus forced to gamble on whether the reinforcements could be brought in safely, in sufficient numbers and in time.

This situation and its implied need to hold the Japanese north of Johore until reinforcements permitted an effective offensive were immediately apparent to General Wavell when, on the day of the Slim River disaster, he reached Singapore. The day after his arrival in Malaya he visited the headquarters of both the 11th and 9th Indian Divisions. He at once appreciated that the most urgent need of III Corps was rest. He therefore ordered that the 8th Australian Division (except the 22nd Brigade Group which was to stay in the Mersing area) should move to north-west Johore to meet the main enemy drive on the Segamat-Mount Ophir-Muar line. These Australian troops, commanded by Major-General Bennett,[9] would be supplemented by four battalions then comprising the 9th Indian Division, which in turn would be brought to strength by addition of the freshest troops of III Corps and of the 45th Indian Brigade.

Wavell also surveyed the defence of Singapore. He noted that no defences against invasion from the north had been constructed or planned, an omission which he ordered to be corrected at once. His battle plan was that General Bennett's force, to be known as Westforce, would form the main line of resistance in the Segamat-Muar sector. The III Corps with the 22nd Brigade Group A.I.F. (Eastforce) would defend southern Johore on the Endau-Kluang-Batu Pahat line. The 11th Indian Division was to be rested and reorganised in Johore.

While these plans were being made the 11th Division was still in the front line though General Heath had withdrawn it farther south. The division was ordered to hold Kuala Lumpur until midnight of 10th-11th January and then fall back about 30 miles to the Seremban area.

On 10th January the hard-worked Blenheim crews were called on to destroy 13 trains laden with British stores that had been stranded on the Malacca branch line because of the congestion and dislocation of traffic on the main railway. They achieved partial success in this, and in a comparable operation two days later they bombed several oil tanks that had been left intact at Port Swettenham.

The decision to withdraw from Kuala Lumpur, capital of the Federated Malay States, carried a heavy responsibility that was emphasised by the obvious distress of the Asian population to whom the long column of retreating troops under a sky dense with the smoke from blazing buildings and oil stores was nerve-breaking. It began their own disorganised retreat to Singapore by road and rail—a retreat that broke their con-

[9] Lt-Gen H. Gordon Bennett, CB, CMG, DSO, VD, NX70343. (1st AIF: Comd 6 Bn 1915-16, 3 Inf Bde 1916-19.) GOC 8 Div 1940-42, III Aust Corps 1942-44. Public accountant and company director; of Sydney; b. Balwyn, Vic, 16 Apr 1887.

fidence in British rule and was to cause serious civil problems in that already congested city.

Continuing his tactics of land-and-sea movement, the enemy was pressing down the west coast of the peninsula. A water-borne force landed near Port Swettenham on 10th January without opposition, occupied the town, and then pushed inland in the hope of cutting off the 11th Division's retreat. They missed this opportunity by only a few hours. On 12th January the commander of the *5th Japanese Division* set up his headquarters in Kuala Lumpur and thus closed the first phase of *XXV Army's* plan for the conquest of Malaya. Although petrol and oil stores at Kuala Lumpur and Port Swettenham had been run to waste or burned, and demolition had been carried out at Kuala Lumpur airfield, the enemy gained much valuable war material.

In the success of the Japanese advance there was, of course, emphasis on his success in severing the III Corps' communications. Percival has since written that the best way to maintain communications was to supply the forward troops by air. In fact Far East Command had no aircraft suitable for such operations and very few containers for supply dropping. The result was that forward troops had to have with them the reserves they needed to maintain them in the field for seven days, a very heavy penalty in terms of mobility and a contrast to the situation of the comparatively unburdened enemy.

Further tactical reconnaissance operations over Port Swettenham, Kuala Lumpur and Ipoh occupied No. 21/453 Squadron on 10th and 11th January. On the 12th there was another demonstration of the frustration these pilots were called on to endure. Eight Buffaloes took off from Sembawang to help defend Singapore against enemy air formations that numbered more than 100 aircraft. After a harassed controller on the ground had directed them successively to three different sectors on their gridded maps, the Buffalo pilots picked out one formation of 27 bombers which was clearing the target area after the attack. With throttles wide open the Buffaloes gave chase. When the enemy pilots saw that they were being overtaken, they too opened their throttles and, their aircraft the lighter for having released their bomb-load, they went into a shallow dive and gained speed. From that moment the Buffaloes were left behind. "Bombers outpacing fighters," one Australian pilot said afterwards with disgust, "You've got to —— well laugh!" The enemy having divided into three formations, had bombed Seletar, Tengah and the docks in Keppel Harbour, and then flown away without interception, leaving fires burning in each target area. The Buffaloes landed again, their pilots to return to the "alert room" to await further orders and hold "post mortem" examinations on yet another futile attempt to meet and match the enemy.

The "alert hut" (Kinninmont wrote later) was a large room at one end of our double-storied brick station headquarters building. Fifty yards across the road was the edge of the aerodrome, and down to the left were four huge iron hangars.

Straight out from the alert hut our fighters were lined up ready to go. Other Buffaloes were dispersed in built-up earthen pens around the edge of the field and back in the rubber. Hangars and workshops and all vital sections were roughly inside this headquarters area. Thus the pilots spent most of their time in the centre of the choicest target on the station; which fact left them quite unconcerned.

It was in this attack on Singapore targets that No. 488 (Fighter) Squadron, R.N.Z.A.F., formed under the Empire Air Training Scheme, had its first air combat as a unit.[1] Based on Tengah, which had been heavily bombed three days before when the unit's offices and equipment, oil and ammunition stores were practically demolished, the squadron put 8 Buffaloes into the air. Soon they were in action against 27 enemy fighters, which had, as was customary, the advantage of greater altitude. Within minutes 2 Buffaloes had been shot down but both pilots parachuted to safety. Three other pilots were wounded and 5 Buffaloes damaged. On Singapore Island the Buffalo pilots on the ground needed at least 30 minutes' warning of an enemy raid if they were to take off and reach an altitude of upwards of 20,000 feet at which the Japanese formations usually flew. But with the successive evacuation of Observer Corps posts as the enemy advanced down the peninsula and the inadequacy of the radar cover, warnings of 30 minutes were almost unknown. When the Buffalo pilots did succeed in joining the enemy in combat they were outnumbered in any ratio between 6 and 15 to one. Of Singapore's anti-aircraft defences, only the 3.7-inch guns, of which there were but 40 on the island, could reach the enemy aircraft flying at altitudes of 20,000 feet and more.

Through "black weather fronts" and heavy rain storms the Hudson and Glenn Martin crews were maintaining arduous reconnaissance sorties from Sembawang, sorties now becoming increasingly hazardous because of the enemy's acquisition of closer bases for their fighters. It was becoming commonplace now for these aircraft to return riddled with bullet holes caused by the fire from intercepting Zeros. As an example there was the experience of Flying Officer Gibbes[2] who had joined No. 1 Squadron at Kota Bharu on the very eve of the invasion. Gibbes brought his Hudson back badly holed by enemy gunfire from each of four successive sorties and each time it was patched up and made airworthy again by the ground staff.

The Australian Buffalo pilots made another and their last attempt to strike at the Japanese on the ground at Kuantan on the afternoon of 12th January. Again a wall of bad weather made approach to the target area impossible. The tactics employed on these offensive sweeps were

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[1] No. 488 was formed in New Zealand in September 1941 at the request of the British Government, earlier in the year, for a fully-manned fighter squadron to share in the defence of Singapore. The squadron reached Singapore in October and was converted to and equipped with aircraft left by No. 67 Squadron RAF when that squadron was transferred to Burma. No. 488 Squadron had achieved partial operational proficiency by December, and by January 1942 was performing routine patrols and taking part in major engagements.

[2] Sqn Ldr P. J. Gibbes, MVO, DFC, AFC, 262097. 6 Sqn, 1 Commn Flight, 1 and 7 Sqns; Test pilot duties, Laverton, 1943; Trans Pacific Ferry Service 1943-45. Commercial pilot; of Darling Point, NSW; b. Roseville, NSW, 4 Apr 1915.

those used successfully by the R.A.F. in the Middle East. The squadron flew as a formation but each pair of aircraft would weave forward in wide curves, a manoeuvre which permitted a much greater area of search than was possible in direct flight. On this occasion two weaving Buffaloes collided. One of the pilots, Harrison, succeeded in crash-landing his aircraft in the jungle. Setting out for the coast he trudged determinedly for two days. On the second night he found himself in a mangrove swamp. The only place he could find in which to sleep was a hut at the end of a long Malayan fish-trap. During the night the tide rose and he was forced to climb on to the roof where he clung while three crocodiles cruised round him in the moonlight. Next day he stayed until the crocodiles, seemingly tired of waiting, disappeared and then he struggled to the coast near Mersing where he was found by an A.I.F. patrol and brought back to safety. The other pilot, Wallace, managed to keep his damaged aircraft flying until he was over the sea near Tengora. By this time he was losing height so he "ditched" his Buffalo in the sea and, though injured and bleeding freely, succeeded in swimming 200 yards to the shore. For two days he struggled through the jungle and then built a raft and floated down a river until he, too, was found by an A.I.F. patrol. Though only two miles from the A.I.F. base at Jemaluang, the party took five days to make their way through jungle with the injured airman, who was then flown to Singapore by one of that little group of gallant airmen, the Malayan Volunteer Air Force.

At dawn on 13th January No. 21/453 Squadron, with 14 Buffaloes, was ready for the big event—the arrival of the convoy carrying the 51 Hurricane fighters. As the convoy approached the island, one half steaming towards Keppel Harbour and the other half towards the naval base, enemy air formations numbering about 100 aircraft were reported to be approaching. It was at this critical moment that the weather, which seemed to have favoured the enemy so consistently since the Malayan campaign began, turned against them. Closing in rapidly a heavy cloud formation completely screened the convoy from the Japanese bombers and screened the attackers from the circling Buffaloes. For the next 24 hours weather, as "bad" as Singapore had known for a long time, gave the convoy complete freedom from air attack not only in berthing but in disembarking its troops and unloading its cargo.

Reinforcements included in this convoy were a brigade of the 18th British Division; the 51 Hurricane fighters, in crates, accompanied by 24 Hurricane pilots from Nos. 17, 135 and 136 (Fighter) Squadrons R.A.F.; and a nucleus ground staff of No. 232 (Fighter) Squadron R.A.F., the new Hurricane squadron for Far East Command. Some indication has been given of the tension that existed as the convoy approached; its safe arrival produced a sense of exultation among those who knew what it had brought. Understandably they felt that this, at last, might be the turning point; here was the means to sweep the Japanese from the

skies and stem their advance on the Malayan mainland. Thus stimulated they went to work with all speed to prepare the Hurricanes for battle.

A reconnaissance by two Buffalo pilots, Flight Lieutenant Sproule and Sergeant Parsons,[3] brought news of enemy air activity at Kuantan—30 Zeros on the ground and a number airborne. Low cloud gave the Buffalo pilots good cover and they returned without combat. All enemy activity on the east coast was now watched with growing concern for Intelligence reports increasingly suggested that a major Japanese landing in the Endau area, to the north of Mersing, could be expected in the disturbingly near future. Initially General Bennett had been in communication with Group Captain McCauley on the question of air support. He has since recorded that the liaison between his command and the R.A.A.F. was "excellent" and that he had received a copy of McCauley's tentative proposals for air cooperation with the A.I.F. in the event of an attack. These had been submitted to Pulford for approval. The decision by Wavell that the 8th Division should move to meet the main enemy drive cancelled any such plans. But now, it seemed, a Japanese attempt to land a large force on the east coast and to strike south from there was imminent.

[3] Sgt H. W. Parsons, 407802. 21 and 21/453 Sqns. Storeman; of Port Adelaide; b. Adelaide, 5 Jun 1918. Killed in action 19 Jan 1942.

CHAPTER 17

WITHDRAWAL FROM SINGAPORE

SOME of the long-sought reinforcements had arrived at Singapore and more were following, but the new troops were voyage-stale and insufficient in numbers, and the aircraft—notably the seaborne Hurricanes —were not ready for immediate combat.

Meanwhile the battle line of General Percival's weary forces continued to sag. There was a freshet of hope when a well-conceived ambush by the 2/30th Battalion at Gemas on 14th-15th January was successful to the point of being memorable in a campaign in which successes were few. Yet, as Percival has recorded, "throughout the campaign we were so blind from lack of ground visibility and lack of air reconnaissance that we frequently under-estimated the strength of the enemy opposed to us. . . . The fact of the matter was that sea-power, supported by air-power, had become . . . one of the dominating factors in the situation—only this time it was the enemy and not we who held the trump cards."[1] Resistance continued to weaken.

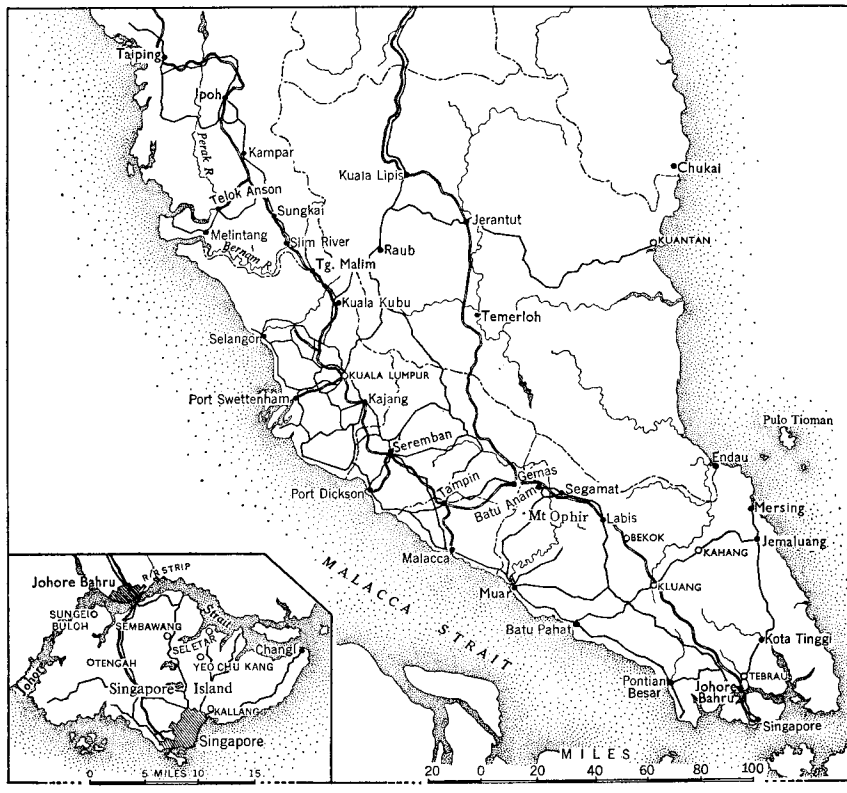
Two Buffaloes from No. 21/453 Squadron, making a tactical reconnaissance over Seremban and Gemas on 15th January, found a large enemy convoy on the Gemas road and attacked it with gunfire. That day two other aircraft from the same squadron sighted a convoy of small enemy ships near Port Dickson. Six Hudsons (from No. 8 Squadron) and 3 Blenheims escorted by 12 Buffaloes went to attack, but the ships had taken cover and the bomber crews could not find them.

On the 16th air reconnaissance showed a heavy concentration of enemy vehicles on the main Gemas-Tampin road, apparently a result of the 2/30th Battalion's ambush. Twelve Buffaloes from No. 21/453 Squadron went in to attack with gunfire and though 5 of the aircraft were damaged by ground fire they did much damage to the convoy. Later in the day 6 Dutch Glenn Martins, which the Buffaloes escorted, returned to this promising target. On the way they were fired on by an A.I.F. unit near Segamat which mistook their identity. Though the Australians' fire was described by the Buffalo pilots as "very accurate" no serious harm came from the mistake, indicating how helpless the ground forces were against air attack. In the attack itself the road convoy was heavily bombed and strafed. Enemy anti-aircraft fire hit several of the attacking aircraft but there were no casualties. The bombing completed, the Buffaloes escorted the Glenn Martins to within a safe distance of their base at Sembawang and returned to make further gunnery attacks on the convoy. Many Japanese troops were killed in the series of assaults and their vehicles blasted or burned. General Bennett recorded that, up to this time, the Japanese had been "careless and weak in road discipline" but, on the

[1] Percival, *The War in Malaya*, pp. 228-9.

next day, apart from charred remains, not a vehicle was to be seen on the road.

Later on the same day as the air attacks were made at Gemas, 4 Buffaloes from No. 21/453 Squadron attacked enemy barges, a 200-ton steamer, and several launches at Malacca, sinking 4 of the barges. Meanwhile 6 Hudsons attacked barges on the Muar River. The records of the



Southern Malaya and Singapore Island

squadron for the 16th January suggest that delay in getting the Dutch bombers to the target after the initial attack by the Buffaloes gave the Japanese time to clear the road and so save the convoy from almost complete destruction.

Four Buffaloes from No. 21/453 made a strafing reconnaissance over Gemas on the 17th, while 6 escorted 14 Vildebeestes in a bombing attack on barges and other targets in the Malacca area where, since there was no air opposition, the fighters joined in with gunfire. As they were returning to their base 3 of the Vildebeestes were attacked by 3 enemy

fighters. Flying Officers Grace and Vanderfield and Sergeant Clare,[2] three of the Buffalo pilots, counter-attacked and probably destroyed all 3 Japanese fighters without loss to their own number, though the need to maintain cover over the Vildebeeste formation prevented them from confirming the enemy's loss.

In between these operations in support of the ground forces Australian fighter pilots continued to share in the air defence of Singapore. About 9.30 a.m. on 15th January three Buffaloes piloted by Vanderfield, Flight Lieutenant Kinninmont and Flying Officer Bowes[3] were patrolling at 20,000 feet when they sighted a formation of 21 enemy bombers about 4,000 feet below them. The bombers' speed was such that the Buffalo pilots each were able to make only one attack, but two of the enemy bombers were destroyed and one probably destroyed. Kinninmont's aircraft was damaged and he had to make a forced landing. Soon after this combat 6 Buffaloes were airborne in an attempt to intercept another enemy formation, this time numbering 27, but they failed to close for action.

On the 17th R.A.A.F. Station, Sembawang, had its first experience of a major pattern bombing attack. Most of the enemy's air attacks on aerodromes on the Malayan mainland were made by formations of 9, 12 or 15 aircraft. For the attacks on Singapore Island the enemy had increased the strength of their formations to 21, 24 or 27, and even 54 bombers with fighter escort. These flew in V formation at altitudes of between 16,000 feet and 25,000 feet, and the pattern technique now preferred to the bombing of specific targets had devastating effects on the aerodromes. Seletar and Tengah airfields were consistently attacked from the outset, but for some reason Sembawang was not singled out until the 17th.[4] On that day 27 bombers attacked. The water mains were so damaged that the station's water supply was seriously affected for the rest of the campaign. Station headquarters, operations room, hospital, stores, barracks, messes, kitchens and hangars all received hits. Power, light and telephone services were disrupted and many craters were made in the aerodrome and main roadway. Three Buffaloes and three Hudsons were destroyed and others damaged. Casualties among the squadrons and station staff were very light because the station's system of slit trenches was good. Even before the bombers were out of sight men were risking flames and unexploded bombs in their attempts to extinguish fires and salvage aircraft.

Other raids on Sembawang were to follow, each causing some damage, but the effects, at least in aircraft losses, were not so severe because the

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[2] Sqn Ldr A. W. B. Clare, 402769. 453, 21/453, 76, 24 and 5 Sqns; comd 5 Sqn 1944-45. Bus driver; of Newcastle, NSW; b. West Maitland, NSW, 1 Sep 1910.

[3] Sqn Ldr F. L. Bowes, 402846. 453, 21/453 and 76 Sqns; comd 76 Sqn 1944; SO Training Eastern and North-Eastern Areas 1945. Trustee officer; of Coogee, NSW; b. Melbourne, 28 Feb 1915.

[4] Japanese radio propaganda ascribed the reason for this temporary immunity to the "high regard" in which the Australians were held by the enemy. On one occasion a broadcaster promised that when paratroops were dropped on Singapore Island, only geisha girls would descend on Sembawang.

dispersal facilities were well planned. Perhaps the most serious consequence of the raids was that, as elsewhere, there was an almost complete exodus of Asian labourers.[5] Thus all aerodrome repair work and all menial tasks had to be done by the already hard-working R.A.A.F. ground staff, some of whom toiled day and night almost to the point of exhaustion. The work of filling in bomb craters was exacting; the entire equipment consisted of six trucks, one small hand roller, and a few native hoes and ramming poles. The nearest slit trenches were half a mile from the aerodrome. Many alerts were sounded but work continued until the so-called "Jim Crows"—men posted especially for the purpose —warned that enemy aircraft were actually in sight and approaching Sembawang.

As distinct from the attacks on the first days of the campaign when, because the enemy's aircraft had to operate from bases in French Indo-China and their raids were thus limited to one a day, the attacks on Singapore Island were now frequent and daylight bombing was a common experience. Added to this the difficulty in providing warning of raids in sufficient time for the fighters to take off with any reasonable chance to intercept was increasing as the ground forces withdrew down the peninsula. Air operational control on the island generally was severely restricted by lack of adequate radio equipment and the unreliability of radio-telephone communications. These conditions applied generally to the four main aerodromes on Singapore Island. Since practically all local native labour had disappeared a Director of Labour had been appointed to control all available labour in the island and the collection and allocation of increasingly precious motor transport was brought under the control of the Director-General of Civil Defence. Aerodrome repair was given first priority and air force labour parties were strengthened at the expense of those engaged in army defence construction work and by the allocation to each aerodrome of naval working parties, each 100 strong, made up from survivors from H.M.S. *Prince of Wales* and H.M.S. *Repulse*.

The 17th was a day that proved costly not only to Sembawang. At Seletar 2 Catalinas were burned at their moorings and 2 others damaged. At Tengah 6 Blenheims were damaged. Next day the naval base and docks were heavily attacked. Though 2 enemy aircraft were shot down and perhaps 6 damaged, the cost of this air combat was 8 Buffaloes.

Between 16th and 18th January the enemy made a further succession of waterborne movements along the west coast, this time between Muar and Batu Pahat. Across the whole peninsula the British troops were now withdrawn to a line between Pahat and Mersing—the Johore line—on which Wavell hoped they might gain a breathing space in which to reorganise and consolidate. The plan was that the remaining strength

[5] Many Asians belonging to organised units proved themselves much more than reliable. At Seletar the Chinese and Eurasian members of No. 1 Repair and Maintenance Unit, whose own organisation was the Singapore Technical Corps, often went on with their urgent task of assembling Hurricanes after most Europeans had taken shelter because a raid was imminent. Comparable good discipline was displayed by the Sikh aerodrome guards, and by members of the Indian regiment manning the Bofors guns at Seletar.

of the air forces would give every possible aid to the ground forces, but it was a symptom of the confused state of the campaign that a portion of the very limited air strength should be wasted through lack of precise target information. The need for closer liaison between the ground and air forces was being demonstrated much too often. The enemy on the other hand made good use of portable radio equipment. Company commanders carrying sets equipped with headphones were in contact with army cooperation aircraft so that their troops could halt or advance on the advice of aerial observers; and ground-to-air radio communication was effectively used to direct aircraft to their targets.

On the 18th Flying Officer Sproule, one of four Buffalo pilots from No. 21/453 Squadron who had escorted 6 Blenheims to attack road and rail traffic in the Gemas area, shot down an enemy fighter. Later in the same day 2 more aircraft from No. 21/453 accompanied 3 of No. 8 Squadron's Hudsons to seek out an enemy ship reported off the coast near the mouth of the Muar River. The ship could not be found but a strong force of Zeros was encountered. Sergeant Chapman was shot down. One of the Hudsons, piloted by Flight Lieutenant Bell, was chased for about 20 miles among the surrounding hills until Sergeant Parsons, another Buffalo pilot, succeeded in diverting and possibly shooting down one of the two pursuing Zeros before rejoining the Hudson and escorting it safely back to Sembawang. The other 2 Hudsons had turned seaward with at least 5 Zeros in pursuit. The rudder control of one Hudson, piloted by Flight Lieutenant Arnold, was damaged by enemy fire. Flight Lieutenant Kleinig,[6] the pilot of the other, flew his aircraft as escort to Arnold's which crossed the north of Sumatra before it could be turned about. In late afternoon, as both Hudsons were closing on Palembang, Arnold's aircraft went into a spin, crashed on a low hill at the edge of the aerodrome and burst into flames.

The first directive from ABDA Command to Air Vice-Marshal Pulford, issued on 18th January, confirmed his own appreciation of his command's most urgent tasks. He was directed to care first for the incoming convoys, to maintain a close watch against new threats of enemy landings on the east coast or attempts to by-pass Singapore to the south, and to make attacks on enemy concentrations and particularly on the Singora base. Yet both Pulford's strivings and the directive itself were beyond the realities of the situation. General Percival emphasised this later by noting that attacks on Singora could seldom be made by more than half a dozen aircraft—attacks which could not have any material effect on the rate of the Japanese advance.

In southern Malaya Percival's troops met the same problem they had faced in central Malaya, but in even more acute form: the defence of a string of aerodromes and landing grounds was urgent if the enemy

[6] Sqn Ldr K. G. Kleinig, 280511. 8 Sqn; Controller Southern and Eastern Areas 1942; CGI 1 OTU 1942-43; Directorate of Training 1943-45. Commercial pilot; of Unley Park, SA; b. Adelaide, 20 Jan 1918.

was to be prevented from doubling the scale of his attacks on the Singapore area and on incoming convoys. Yet effective strength to prevent him from doing so simply did not exist.

On 18th January, aircraft serviceability in Malaya was 74 bombers and general reconnaissance aircraft, and 28 fighters, all based on Singapore Island except for the small Wirraway detachment at Kahang. The Japanese, it was estimated, already had 250 bombers and 150 fighters based on the peninsula. Pulford had no choice but to concentrate his meagre forces as best he could and allow the priority for their operations to be dictated by circumstances.

By the 19th the situation in the Muar area was so disturbing that all possible air support was dispatched to aid ground troops. The first air operation of the day was an attack on enemy positions and barges on the Muar River by four Glenn Martin bombers and five Wirraways from Kahang where, significantly, the operational training unit had become a combat unit. The Wirraway pilots were all New Zealanders and their observers all Australians. The attacking force was escorted by 8 Buffaloes from No. 21/453 Squadron. While the Glenn Martins bombed the Japanese headquarters, the Wirraways attacked launches and troop-laden barges they were towing across the river. The crews of these redoubtable little Australian aircraft, which No. 21/453 Squadron had brought with them to Malaya, had fitted them with ingenious "soup plate" sirens which, when turned into wind, made an almost deafening scream. This appeared to demoralise the enemy troops as the Wirraways dived on them. As the attack began a strong force of enemy fighters retaliated. The Buffalo pilots engaged them and in the battle that followed Sergeant Parsons was killed when his aircraft was shot down. All 4 Glenn Martins were also shot down as was one Wirraway, the pilot and observer of which landed by parachute and were brought in by an A.I.F. patrol. When 3 enemy fighters were about to dive on the Wirraways, Flight Lieutenant Kirkman put his Buffalo into a dive and shot one of them down. Kinninmont, Vanderfield and Sergeant Gorringe[7] also each shot down an enemy fighter. The success of the Buffalo pilots was due in some measure to their skilful use of cloud cover in which they eluded the more manoeuvrable Zeros, emerging again to take advantage of surprise attack.

In the afternoon 9 Buffaloes of No. 21/453 Squadron were making an offensive sweep over the Muar area when they sighted a formation of Zeros below them. Their attempt to attack these aircraft was foiled by another formation of Zeros and Tonys, approaching undetected at higher altitude, which dived on them.[8] That night 9 Vildebeestes bombed the Kuala Lumpur aerodrome where Buffaloes from No. 488 Squadron

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[7] F-Lt K. Gorringe, 402859. 453, 21/453 and 76 Sqns; Instructor 2 OTU 1942-43; 2 FSHQ and 114 FS. School teacher; of Lithgow, NSW; b. Wellington, NSW, 22 Feb 1916.

[8] A memorandum written after this operation by Sqn Ldr Harper, then commanding No. 21/453 Sqn, refers to the absence of top cover which had been expected from No. 488 Squadron and notes that the difference in the radio telephone wave-lengths used by the three squadrons prevented the leader of the Buffalo formation from himself detailing aircraft for that purpose.



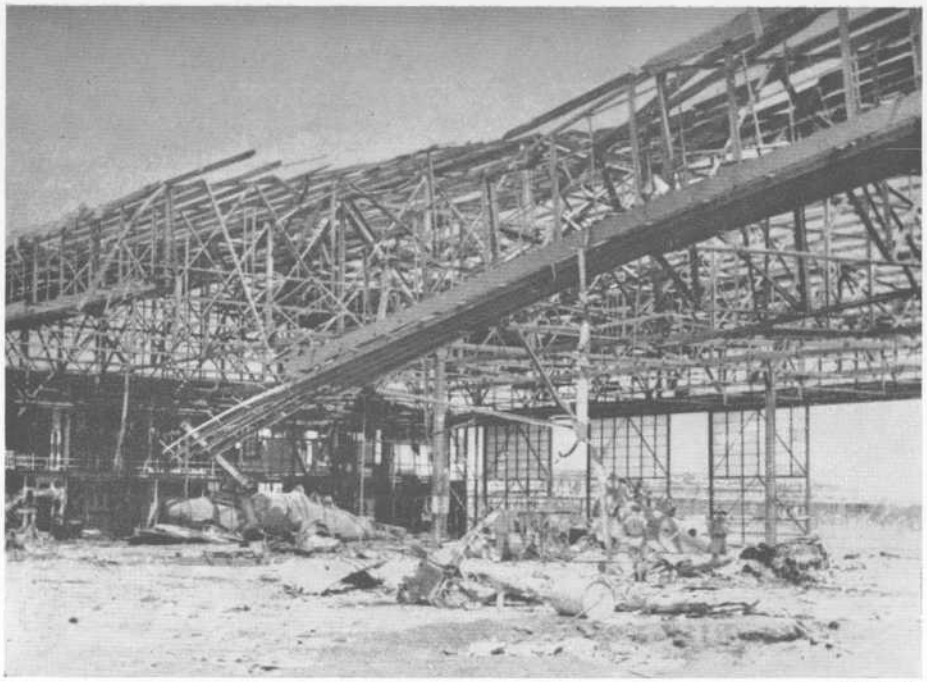
(*R.A.A.F.*)

Smoke from burning Blenheims of No. 45 Squadron R.A.F. after a Japanese raid on Magwe, Burma, on the afternoon of 21st March 1942. The attack, sustained during 25 hours, destroyed No. 45 Squadron as an operational unit until it re-formed with Vultee Vengeance dive bombers in mid-1943.



(*R.A.A.F.*)

The retreat from Burma to India. No. 45 Squadron vehicles descending the five-mile gorge on the approach to Mandalay.



(*R.A.A.F.*)

Damage to the main hangar at R.A.A.F. Station, Darwin, after the Japanese raids on 19th February 1942.



(*R.A.A.F.*)

The interior of No. 13 Squadron's hangar at Darwin after the raid on 25th June 1942.

R.N.Z.A.F. had sighted about 20 enemy fighters on the ground; American Flying Fortresses from Sumatra also bombed this field.

On the 20th six Buffaloes swept over the Muar-Gemas area escorting two Albacores from No. 36 Squadron, in response to an army signal which reported that troops were being heavily dive-bombed. The Buffaloes encountered six Japanese bombers, one of which they shot down. The remainder jettisoned their bombs and gained sufficient speed for evasion. Kuala Lumpur was again bombed and machine-gunned that evening by seven Blenheims which returned to claim the destruction of more than 20 enemy fighters on the ground. At the same time 6 Hudsons attacked Kuantan and later that night both aerodromes were bombed again, each by 12 Vildebeestes. Of such attacks Bennett wrote against the date 20th January: "Our air force is rendering valuable help considering its numerical weakness and the inferiority of its machines."

It was on this day that the main ground staff of the two Australian Hudson squadrons and of No. 34 Squadron R.A.F. embarked in the steamer *Kedah,* at Singapore naval base, for Palembang. On the first night at sea engine failure made it necessary to heave to so that repairs could be made. The ship was packed to capacity and messing arrangements were very difficult. An Australian chaplain, Padre Adam,[9] did much to solve the problem by personally serving hundreds of meals. The *Kedah* reached Palembang safely on the 22nd and the air force ground staff parties promptly moved out to an aerodrome known as P.2. On that day the two Dutch Glenn Martin squadrons also withdrew from Singapore Island to Java where they reverted to Dutch control.

January 20th was a day of great excitement and rejoicing in Singapore. The Hurricanes went into combat over the city for the first time. Twenty-seven enemy bombers came over unescorted; only 19 of them left for the return flight; 8 had been shot down without loss to the Hurricane squadron. But the new-found confidence in Singapore was brief. The enemy bombers never came again without escort. On the very next day, in fact, they were back with a strong escort of Zeros which shot down 5 of the precious Hurricanes without loss to themselves. Thereafter the Hurricane pilots were almost always at a disadvantage. Though their aircraft were a great improvement on the Buffaloes, they still were not equal in all-round performance to the Zeros. The type received—the Hurricane II—had been intended for service in the Middle East and thus was fitted with a desert air intake filter which deprived it of about 30 miles an hour in speed. At an altitude of 20,000 feet and higher the Hurricane had an advantage over the Zero in both speed and climb. It could also dive at higher speed, but the Zero always held an advantage in manoeuvrability, and the Japanese soon learned to attack at lower altitudes. The Hurricane pilots quickly learned that "dog-fighting" did

[9] Sqn Ldr A. A. Adam. RAF Far East Cd; 2 BAGS 1942-44; Area Chaplain, North-Eastern Area 1944. Presbyterian minister; of Holbrook. NSW; b. Bathurst. NSW, 5 Feb 1905.

not pay. The enemy's greatest advantage, however, was numerical and this, as the days passed, he not only maintained but increased.

At the sight of those planes (Kinninmont wrote of the Hurricanes' first appearance in the sky over Singapore) morale skyrocketted 100 per cent, and the sun shone again and the birds sang. . . . That evening at all the night spots the gay topic of conversation was "Hurricanes". The miracle had happened. The Hurricanes were here and their world was saved. "Boy! More stengahs—long, with ice!" . . . The RAF boys flying them began to mix it with the Zeros which we knew was practically impossible. The Zero was just about the nippiest, most highly manoeuvrable fighter in the world. They buzzed around the Hurricanes like vicious bees. The RAF Hurricane pilots fought gallantly and courageously against overwhelming odds and during their brief period of operation in Malaya they scored several brilliant victories and shot down many Japs. But they too "took the knock".

General Bennett wrote on 21st January: "Our troops are elated at the appearance of the newly-arrived Hurricanes"; but Maltby, some years later in his despatch, recorded that "too much had been expected of this handful of Hurricanes". Hope gave way to despair. The pilots, under the command of Squadron Leader Brooker,[1] strove magnificently, but the victory was to the numerically strong.[2]

On the day that the Hurricanes first went into combat Wavell returned to Singapore for a further review of the Malayan campaign at first hand. He now recognised that a withdrawal to Singapore Island might be inevitable. Avoidance of this depended on the numerical and physical strength of his troops, the extent and the speed with which they could be reinforced, and the ability of Far East Command to maintain fighters on the island. On 21st January he was graphically reminded that the British Prime Minister was now in no doubt about the gravity of the Malayan situation. In a cablegram Wavell received that day, Mr Churchill gave his orders:

I want to make it absolutely clear that I expect every inch of ground to be defended, every scrap of material . . . to be blown to pieces to prevent capture by the enemy, and no question of surrender . . . until after protracted fighting among the ruins of Singapore city.

In his reply, sent on the same day, Wavell stated simply and directly a fundamental weakness in all the pre-war planning for the defence of Singapore:

I am anxious that you should not have a false impression of the defence of Singapore Island. I did not realise myself till lately how entirely the defences were planned against seaward attack only.

The Supreme Commander, in his despatch, has recorded that in the first four weeks of his command in the South-West Pacific his efforts

[1] W Cdr R. E. P. Brooker, DSO, DFC, 39931, RAF. 20, 122, 132 Wings; comd 1 Sqn RAF 1941, 77 Sqn RAAF 1942; special duties RNZAF 1942-43; comd Fighter Ldrs' Schl 1943-44; 82 GCC 2nd TAF 1945. Regular air force offr; b. Chessington, Surrey, England, 2 Nov 1918. Killed in action 16 Apr 1945.

[2] Between 20th and 28th January the average daily Hurricane serviceability was only 16; by the 28th 17 of the 51 received had been destroyed, 2 were repairable at the unit, 7 repairable at the depot and 21 were available, plus 4 more in 24 hours.

were all directed to maintenance of the line of bases from Darwin, through Timor, Java and southern Sumatra to Singapore, on which he was striving to build up "above all, an air force capable of securing local air superiority and thereby checking the Japanese advance southwards". "I considered," he added, "the naval and land efforts subordinate, for the time being, to the need for a really strong air force." In a review of the position which he sent to the Combined Chiefs of Staff on 24th January, nine days after his command had been established, he referred to the enemy's superiority in the air as the primary reason why his forces might have to withdraw to Singapore Island.

Thus, despite the valour, the successes achieved against great odds, and the desperate efforts to make the best possible use of every aircraft available, really effective air support for the ground forces was so rare as to be of little consequence. Far East Command's poverty was grimly illustrated in the Muar battle. An A.I.F. column, commanded by Lieut-Colonel Anderson,[3] had doggedly delayed the advance of the *Guards Division* which had, in Percival's words, "all the advantages of air and tank support". Anderson's men, almost exhausted from days of continuous fighting, were desperately short of food because their lines of supply had been cut, and were striving to care for wounded for whom they had few medical supplies. He signalled asking for air attack on the enemy's positions and that food and morphia be dropped to his column from the air. On 22nd January two obsolete aircraft (Albacores from No. 36 Squadron) flew under cover of darkness and, guided by a flare, dropped food and morphia. That was the most that the air force could do for these gallant troops. Though pathetically little for their needs, it was typical of Anderson and his men that they were deeply grateful; the supplies, they reported, had been dropped very accurately. But no effective air attack in support of his column could be mounted.

Poverty in aircraft is a pervading theme in Maltby's despatch on the campaign. Against the date 22nd January he records that the road from Muar to Batu Pahat was attacked by "2 Albacores, 1 Shark and 6 Buffaloes". The greatest strength in aircraft sent out at this time was 12 and for the most part these were the battle-worn and obsolete Vildebeestes or the inadequate Buffaloes. On 25th January, in addition to the customary Buffalo, Vildebeeste, Albacore, Hudson and Blenheim sorties, Sungei Patani was bombed by "five USA Fortresses from Java under Abdair direction".[4] Using Palembang as an advanced base, the Fortresses flew 1,500 miles to make the attack, but in effect it was but a token raid reflecting the glimmer of a hope on which Far East Command scarcely dared count. On the same day there was news that the airfields at Kahang, Kluang and Batu Pahat had become untenable and so had been "demolished", as had new airstrips specially prepared in southern

[3] Lt-Col C. G. W. Anderson, VC, MC, MP; NX12595. (1914-18: King's African Rifles in British East Africa.) Comd 2/19 Bn 1941-42. MHR 1950-51 and since 1955. Grazier; of Crowther, Young, NSW; b. Capetown, South Africa, 12 Feb 1897.

[4] Maltby, Despatch, para 330.

Johore to accommodate the Hurricane fighters. This was a serious setback because Seletar, which now must serve that purpose, lacked adequate dispersal points.

Latterly airfield construction had been left largely to No. 1 Aerodrome Construction Squadron R.N.Z.A.F. This unit's experience provided eloquent examples of the frustration of these days. Early in January a party from the squadron had almost completed the construction of a bomber airfield at Bekok, about 100 miles north from Singapore, when it received orders to drag trees and other obstacles across the runway and withdraw leaving behind only a small party whose task it was to lay mines for demolition. Bekok was evacuated on 15th January and next day the demolition mines were fired. At Tebrau the squadron began construction of a bomber aerodrome within sound of gunfire as the enemy pressed south. This work completed, the new aerodrome was then prepared for demolition, as was, too, an airfield known as Rifle Range Strip, because it was constructed on the rifle range at the Johore military barracks. Completed by mid-January except for final grading and surfacing, this strip actually accommodated the light aircraft of the Malayan Volunteer Air Force. It was, in fact, the only aerodrome made by the squadron on the Malayan mainland that was used for operations.[5]

Three more convoys arrived at Singapore unscathed between 22nd and 29th January. These brought most of the remaining troops of the 18th Division, the 44th Indian Brigade Group, and about 3,000 reinforcements (including the 2/4th Machine Gun Battalion) from Australia.

The strength of No. 62 Bomber Squadron R.A.F. and No. 8 Squadron R.A.A.F. was now being built up piecemeal as Hudson Mark III aircraft began to arrive in the third week of January. Also arriving about this time—the first on the 23rd—were Blenheim Mark IV aircraft of two reinforcing R.A.F. bomber squadrons (Nos. 84 and 211) from the Middle East. These squadrons were diverted to Sumatra.[6] Air Headquarters also received information that another 48 Hurricanes would be flown in to Singapore from the carrier *Indomitable* about the end of the month and that 39 more, crated, would be arriving by sea.

This added strength and the promise of more to come did something to improve the credit side of the defenders' ledger but it still left a heavy debit to be carried forward, for Intelligence suggested that the enemy would make a strong flanking seaborne movement on the east coast to

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[5] Rifle Range Strip was the last strip to be evacuated when the British forces withdrew to Singapore Island. The squadron moved from the mainland on 27th January—the last air force unit to leave. Next day the mines at Tebrau and Rifle Range were exploded, leaving craters about 30 feet across by 10 feet deep. The squadron then went on working on new strips at Sungei Buloh and Yeo Chu Kang on Singapore Island. Both were almost completed early in February when they came under Japanese artillery fire and had to be abandoned. The unit was then ordered to move to Sumatra. All the heavy equipment was loaded into a ship in Singapore Harbour, but on 3rd-4th February enemy bombing attacks set the ship on fire and it sank. For further details see J. M. S. Ross, *Royal New Zealand Air Force* (1955), a volume of the *Official History of New Zealand in the Second World War 1939-45*.

[6] Only 16 of the 52 Hudsons expected were able to reach Singapore before the enemy cut the air ferry route leading from India. These were divided between Nos. 62 and 8 Squadrons. The movement of the two Blenheim squadrons was also far from complete when the route was cut.

land a force somewhere in the Mersing-Endau area. The advantage of such a movement to the Japanese was obvious. Using the lateral communications in north Johore their forces could be linked right across the peninsula.

With this added anxiety quickening the need for watchfulness to seaward in the east, the burden borne by the two Australian Hudson reconnaissance squadrons increased; it was a burden made more dangerous because of the rapidity with which enemy fighter strength was now being built up at Kuantan. The task of these squadrons was now more properly one for fast, high-flying, photographic reconnaissance aircraft. Lack of such aircraft left the Hudson crews no choice but to continue their set search courses daily over a route which, because fighter interception was increasingly frequent, became known as the "clay pigeon run".

On the morning of 24th January two No. 8 Squadron aircraft, one piloted by Flight Lieutenant Spurgeon and the other by Flight Lieutenant Plenty,[7] were about 20 miles east from Kuantan on their way back to Sembawang, when 4 Zeros intercepted them. The enemy first attacked Spurgeon's aircraft which, after 25 minutes of combat, was forced down into the sea. Of the crew, Spurgeon and his second pilot, Flying Officer Chesterman,[8] escaped from the sinking aircraft. Supported by their lifejackets, they drifted hour after hour, carried southward by the current. During the night Chesterman, unable to endure any longer, was drowned. Spurgeon drifted on until he was washed ashore on the island of Pulo Tioman, about 30 miles north-east of Mersing. Here members of the Chinese community cared for him and, when he had recovered sufficiently, took him in a dug-out canoe to the mainland close to Mersing. Spurgeon then set out to tramp southward, but encountered a Japanese patrol which took him prisoner.

Plenty's aircraft was overtaken by the Zeros after they had forced Spurgeon's aircraft down. It too went into the sea but all its crew got free and after five hours in the water they, too, got ashore on Pulo Tioman. Friendly Chinese took them also to the mainland where, after tramping south along the beach for 24 hours, they found a native boat in which they sailed safely to Singapore.

On the night of the 25th the crew of a Catalina reported having sighted enemy ships off the east coast and moving south.[9] At 6.50 next morning two Hudsons, the captains of which were Flight Lieutenants Colquhoun[10] and Diamond, left Sembawang on reconnaissance up the east coast. They found two cruisers, 12 destroyers, two 10,000-ton transports and three

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[7] W Cdr H. C. Plenty, DFC, 582. 21, 2, 8, 14 and 100 Sqns; Instructor 1 OTU 1944-45. Regular air force offr; of Warnertown, SA; b. Port Pirie, SA, 7 Feb 1921.

[8] F-O S. N. Chesterman, 400001. 14 and 8 Sqns. Insurance clerk; of Melbourne; b. East Malvern, Vic, 24 May 1915. Drowned 24-25 Jan 1942 after being shot down into the sea.

[9] The signal was transmitted at 4 p.m. but, for some reason now unexplainable, the time of receipt in the Operations Room in Singapore was recorded as 8 p.m.

[10] Gp Capt D. W. Colquhoun, DFC, AFC, 250284. 1 and 6 Sqns; Chief flying instructor 5 OTU 1943; Staff Offr War Training RAAF Cd 1943-45. Jeweller and CAF offr; of Melbourne; b. Warragul, Vic, 29 Jul 1916.

barges about 10 miles from, and steaming towards, Endau. Enemy radio interference with their radio-telephone signals prevented them from transmitting the news to Air Headquarters at Singapore. Meanwhile three enemy fighters attacked the Hudsons whose gunners, however, scored hits which probably destroyed two. Using cloud cover, Colquhoun and Diamond succeeded in evading further combat and returned to Sembawang to report that the enemy was almost certainly about to land a strong force at Endau.

The total striking force available to Far East Command now consisted of 9 Hudsons from Nos. 1 and 8 Squadrons, and 21 Vildebeestes and 3 Albacores from Nos. 36 and 100 (Torpedo Bomber) Squadrons. The 3 Albacores and all but 7 of the Vildebeestes had been on night operations, making two sorties each to cover the sea evacuation of a battalion of troops that had been cut off by the enemy in the Batu Pahat area. Before they could strike at the Endau convoy these aircraft had to be refuelled and rearmed, and, since the enemy ships would be lying off shore in water too shallow for effective torpedo attack, an operation for which their crews had been specially trained, it was decided that each should carry four 250-lb bombs (their full load). Much valuable time elapsed before these aircraft could be made ready. Added to this there was, it appears, considerable difficulty in assembling fighter escorts for the bombers. Thus it was not until 12.30 p.m. that the first formation of 12 Vildebeestes, escorted by 6 Buffaloes which were to be relieved over the target by 6 Hurricanes, took off for Endau. This force was followed more than an hour later by the 9 Australian Hudsons, escorted by 6 Buffaloes, which were all that No. 21/453 Squadron could put into the air.

As the Vildebeestes reached the target area where the enemy landing was now well advanced they and the Hurricanes that had taken over from the Buffalo escort were overwhelmed by a force of enemy fighters, later estimated to be at least 50 strong. The Hurricanes' defence was quite inadequate against such opposition and 5 of the Vildebeestes were shot down as their formation, making no attempt to deviate from their bombing run, swept over the enemy ship on which they scored several hits. As the remaining 7 Vildebeestes withdrew after the attack, the Hudsons, arriving over the target, drew the enemy fighters' attention. In contrast to the Vildebeestes, the Hudson pilots took individual action. They made their bombing runs as the targets offered, using such cloud cover as there was to lessen the severity of the fighters' attacks. When one Hudson, piloted by Flight Lieutenant O'Brien, was attacked by several fighters the second pilot, Flying Officer Hughes,[1] and the wireless operator, Sergeant Silk,[2] were killed by gunfire.

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[1] F-O D. Hughes, 577; 1 Sqn. Regular air force offr; of Greensborough, Vic; b. Preston, Vic, 5 Jan 1921. Killed in action 26 Jan 1942.

[2] Sgt E. J. J. Silk, 405092. 5, 6 and 1 Sqns. Leather dresser; of Brisbane; b. Brisbane, 28 Dec 1914. Killed in action 26 Jan 1942.

We were no sooner in sight of the Japanese ships, when some 50 Jap Zeros jumped on us from above (wrote O'Brien afterwards). I was flying in the centre of the closely packed formation of nine aircraft and the first Zero attacked from above. With his first burst he killed my wireless operator, who was on one of the side guns, and also killed my second pilot who was sitting alongside me. My second pilot was killed by a bullet through the head, which afterwards struck me on the shoulder, knocking me over the controls, and lodging underneath my badges of rank on my shirt. The bullet when it struck me was apparently almost spent. . . . We were at 7,000 feet when attacked, and the next thing I remembered was diving, almost vertically through clouds. I pulled out of the dive and remaining in the cloud I took stock of what had happened. . . . I tried to call my rear-gunner on the intercommunication but it had been shot away during the attack, and I was unable to find out if he was alive. My second pilot's feet were all tangled up amongst the throttle and bomb door levers, and I was unable to control the aircraft and lift him out of the way at the same time. I could not get my bomb doors open for bombing so . . . decided to return to base. The cloud cover was big lumpy cumulus from 2,000 to 7,000 feet, and was about 7/10ths covered. The Jap fighters were playing a game of hide and seek tactics with the Hudsons. They would cruise around above the cloud waiting for the Hudsons to come out and then shoot them up. After several attempts I made my way from cloud to cloud and eventually got out of the area.

Flying Officer Gibbes of No. 1 Squadron sighted a motor vessel through a break in the cloud, put his aircraft into a dive, and obtained two direct hits and two near misses with his four bombs. Enemy fighters prevented further observation of the results of this attack. The other Hudsons attacked ships and troop concentrations ashore. All the bombers succeeded in getting back to Sembawang as did all 6 Buffaloes, though 3 of them were damaged by enemy gunfire. Flying Officer Grace claimed one enemy aircraft destroyed and one damaged and Flight Lieutenant Sheppard and Sergeant Leys each claimed one destroyed.

To 9 Vildebeestes and 3 Albacores which made a third attack the operation was even more costly than the first. The timing of their arrival over the target area did not synchronise with that of the Hurricanes that were to give them cover. These slow aircraft (their speed was not much better than 100 miles an hour) thus became prey to the enemy fighters. As though the odds were not already heavy enough, the weather had cleared so that there was no cloud to give even partial protection. Even so, one pilot put a stick of bombs accurately across one of the transports which later was reported by A.I.F. shore patrols to be listing. But the cost was great; 6 of the bombers were shot down by enemy fighters and most of the remaining 6 were damaged by gunfire. Five Hudsons from No. 62 Squadron, now based on Sumatra, carried out the final phase of the attack. Four Buffaloes from No. 243 Squadron and 8 Hurricanes from No. 232 Squadron flew with them as escort. After attacking enemy barges the Hudsons flew back to Singapore. In attempting to land at dusk two of them crashed near the Singapore naval base. Just before his aircraft crashed the wireless operator of one of these Hudsons sent out a signal reporting that the rear gunner had shot down at least two enemy aircraft. The other four aircraft landed safely at Tengah.

Belated and under-powered as they had been, the attacks had resulted in direct hits on both transports and on one cruiser and two destroyers.[3] The attacking bombers and their fighter escorts claimed 13 enemy aircraft destroyed and 5 probably destroyed. Enemy troops ashore had been killed and some of their equipment demolished. It was a very gallant operation, but it was a forlorn one. Whatever the cost to the enemy, with their landing achieved they could well afford their losses. On the other hand Far East Command had paid bitterly in aircraft and still more heavily in lives, including the commanders of Nos. 36 and 100 Squadrons. Eighteen of their aircraft—11 Vildebeestes, 2 Albacores, 2 Hudsons, 2 Hurricanes and one Buffalo—had been lost with most of their crews.[4]

On the day of the Endau battle—26th January—R.A.A.F. Hudsons sighted 3 enemy cruisers and 2 destroyers to the north-west of the Anambas Islands. A report was also received indicating that the *3rd Carrier Division* of the Japanese Navy, including the *Ryujo* and *Soryu,* was operating off Malaya. Under these new threats Wavell cabled to Percival on 27th January giving him permission to withdraw his troops to Singapore Island at his discretion. Percival replied next day that the withdrawal would begin on the night of 30th-31st January.

Congestion on the airfields of Singapore Island was now inevitable. Tengah, Seletar and Sembawang in the north of the island would soon not only be even more vulnerable to air attack but would come directly under artillery fire at ranges as close as 2,000 yards. Kallang in the south would soon be the only airfield available. On 22nd January it had been heavily bombed. The station headquarters had been wrecked and one of four of No. 488 Squadron's Buffaloes that was taking off was destroyed; the pilot and two airmen members of the ground staff were killed. In the next few days this squadron was re-equipped with 9 Hurricanes, but 2 of these were destroyed and 6 damaged when two successive raids were made on the airfield on the 27th. In these attacks No. 243 Squadron lost most of its Buffaloes, 2 Blenheim bombers were burned, 3 fuel tankers were set on fire, motor transport was seriously damaged and the airfield made temporarily unserviceable by many bomb craters. The airfield's surface was simply marl laid on a salt marsh which made the problem of effectively filling these craters particularly difficult. Planned in peacetime as Singapore's civil airport, Kallang, in this desperate situation, had to accept a burden immensely greater than any that had

[3] Claims made by Far East Command that one enemy cruiser and two destroyers had been sunk are not supported by the records of the United States Joint Army-Navy Assessment Committee which was established in January 1943 to evaluate all Japanese shipping losses.

[4] The Maltby despatch states that the attack was made in two waves—one of 9 Hudsons and 12 Vildebeestes escorted by 15 Buffaloes and 8 Hurricanes and the second of 3 Albacores and 9 Vildebeestes with 4 Buffaloes and 8 Hurricanes as escort. There seems little doubt that difficulties in coordinating the various units for take-off, and the marked differences in the speeds of fighters and bombers, caused a breakdown in the timing which resulted in three phases to the attack instead of the two planned initially. The fourth and final phase—the attack by No. 62 Squadron aircraft from Sumatra—was listed separately.

been conceived for it by its designers. Nor, wedged as it was between the city and the sea, could it be extended.[5]

In these circumstances Air Headquarters had no alternative to progressive withdrawal of most of its squadrons to the Netherlands East Indies. By an early agreement, the Dutch squadrons had been first to leave. Now the precious Hudsons of the reconnaissance force must go. On 27th January, the day that Wavell gave authority for the army to withdraw to Singapore Island, No. 8 Squadron's aircrews were flown to Sumatra in Dutch Lodestar transports. No. 1 Squadron was to take over the 14 Hudsons that No. 8 had left at Sembawang, but only 5 of these were airworthy. No. 1 Squadron now had 16 serviceable aircraft. With these the vital reconnaissance flights were continued. On the day No. 8 Squadron's crews left for Sumatra crews of No. 1 Squadron took six Hudsons successively on an "endless chain" search from Johore to the Natuna Islands. The first aircraft took off at 4 a.m. and the others followed at intervals of two hours. One crew reported sighting a large ship, "possibly an aircraft carrier", 30 miles to the north of the Anambas. This "chain" reconnaissance was repeated on the 28th and that evening the squadron was ordered to transfer all its aircraft to Palembang, taking off at first light next day. Two had already been flown across to undergo major overhaul. The remainder left as ordered. On the same morning Group Captain McCauley, who had been posted to command the R.A.F. station at P.2, left Sembawang in a Hudson that was airworthy but not fit for combat. A strong party of ground staff remained to work with the aid of a repair and maintenance unit, in an endeavour to restore to serviceability the Hudsons that had to be left behind. One of these was flown out on 31st January. Flight Lieutenant Marshall,[6] who had been flown from Palembang for the purpose, succeeded in flying out another, with a badly crushed fuselage and warped ailerons—the only other aircraft to be retrieved.

For the fighter squadrons the position was just as grave. Four fighter strips that had been constructed on the island to relieve the pressure on the main airfields had been recognised for some time as a danger in themselves; they offered the Japanese landing areas for airborne troops which then would be behind the island's frontal defences. Because of this all these strips had been blown up by 30th January and action had been taken to place obstruction on other open areas that might serve as landing grounds.

On 30th January Wavell approved a plan submitted by Air Headquarters that only 8 Hurricanes and the remaining 6 Buffaloes should be maintained at Singapore. The Hurricanes expected to be flown off from H.M.S. *Indomitable* would be be based in Sumatra from where they would main-

[5] It was this aerodrome of which the 1938 edition of *Jane's All the World's Aircraft* (p. 28a) published a photograph over the caption: "THE EMPIRE'S GREATEST AIRPORT.—Otherwise known as Japan's finest target. The airport building as seen from the aerodrome."

[6] Sqn Ldr J. H. R. Marshall, MVO, 560. 8, 7 Sqns, 1 OTU, 1 AD; Trans Pacific Air Ferry Service 1943-44; 23 Sqn and comd 99 Sqn 1945. Regular air force offr; of Melbourne; b. Adelaide, 10 Jan 1919.

tain the strength of the unit at Singapore and reinforce it as opportunity permitted.

Earlier, in a signal to ABDA Command (repeated to Air Ministry and the Australian Air Board), Pulford had indicated his intention to rearm Nos. 488 and 243 Squadrons from the 48 reinforcement Hurricanes expected by 27th January. Thus, with No. 232 Squadron, the Command would have had three Hurricane units for the defence of Singapore. But the airfield situation had made this impossible.

Pulford also indicated in his signal that all remaining Buffaloes, with sufficient pilots, would be concentrated in No. 453 Squadron. No aircraft were available "now or in the near future" for No. 21 Squadron. All squadrons, he reported, had been much depleted in action and since No. 21 Squadron was originally a Wirraway unit it had numerous air observers and newly-arrived pilots trained on Wirraways only who could not be employed on fighters. There was no object, the signal continued, in No. 21 Squadron remaining without aircraft, and therefore he was shipping it out at once to Australia to rearm, "as it can do better there than here".

Administrative arrangements for this move were made and all No. 21 Squadron's aircraft spares and equipment were handed over to No. 453 which, on 27th January, had been reconstituted as a separate unit. Several experienced pilots from No. 21 were also transferred to supplement No. 453's depleted strength. On 30th January the remainder of No. 21 embarked at Singapore in the steamer *Takliwa*, but in the meantime their movement order had been changed; they were instructed to move to Palembang to assist in the maintenance of R.A.F. Blenheim bombers until relieved by members of the R.A.F. then on their way from Great Britain. The passage to Sumatra was safely accomplished.

Between 23rd and 27th January three R.A.F. squadrons—Nos. 27 (Night Fighter), and 34 and 62 (Bomber)—had also been transferred to Sumatra, leaving behind them only small aircraft-handling parties. On the 28th No. 205 (Catalina) Squadron had moved to Java, leaving one flying-boat detached for long distance convoy patrol work.

By the end of January the whole bomber force had withdrawn to Sumatra whence it would provide air support for the army invested on Singapore Island; apart from the fighters, there were then only three Swordfish aircraft and the single Catalina on the island. The Swordfish were under army control for coast-defence spotting to guard against the possibility of an undetected attempt by the enemy to make a landing on the island from the sea.

Instructions to units proceeding to Sumatra and Java required that they take with them rations for 30 days, certain barrack stores and 28 days' "pack-up" of aircraft equipment.

Arrival of reinforcements had caused some reorganisation of senior appointments in Far East Command. Group Captain Nicholetts[7] replaced

[7] Air Marshal Sir Gilbert Nicholetts, KBE, CB, AFC, RAF. Comd 228 Sqn 1939-41, RAF Stns Haifa and Shallufa 1941. Regular air force offr; b. Bampton, Devonshire, Eng, 9 Nov 1902.

Group Captain Bishop[8] as Group Captain, Operations, at A.H.Q., and Bishop took command of No. 225 (Bomber) Group in Sumatra. Air Commodore Staton,[9] who had arrived from Great Britain about 19th January, was appointed Senior Air Staff Officer in place of Air Commodore Silly[1] who, appointed Deputy Air Officer Commanding, went to Sumatra to establish a "Rear Air Headquarters" there. Two other senior officers, Air Commodores Vincent[2] and Hunter,[3] arrived from Great Britain on 29th January as commanders designate of the fighter and bomber groups respectively. Hunter was posted almost immediately to Sumatra to take over from Bishop in command of No. 225 (Bomber) Group which had been formed at Palembang. Vincent also moved to Palembang to organise and command the headquarters of No. 226 (Fighter) Group.

Wavell later admitted that his decision to withdraw the air force from Singapore Island was open to criticism since it left the land forces without protection at a dangerous time. But it was his belief that the decision was inevitable. The action in Crete had shown that it was impossible to maintain a weak air force within close range of a stronger enemy air force and that the sacrifice of aircraft brought no relief to the land forces in the end. The troops on the ground could scarcely be expected to appreciate this point of view. Naturally enough these men reacted bitterly.

Wavell, when he approved of the transfer of the main body of Air Headquarters to Sumatra, directed that Pulford himself should move with it. A small advanced headquarters was to remain in Singapore to maintain liaison with the Military Command and Headquarters, and with No. 224 (Fighter) Group which would continue to control fighter operations from there. Pending a decision on a site for the Rear Headquarters, most of the headquarters staff was moved to Sumatra and attached to Headquarters No. 225 (Bomber) Group. But, on 5th February, Abdair, the air headquarters of ABDA Command, perhaps for the moral effect, but specifically because it was considered that Air Headquarters should be in close contact with the General Officer Commanding, Malaya, expressed disapproval of the transfer. Next day, after an exchange of signals, Pulford cancelled the transfer. Though he was himself instructed to move

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[8] Air Cmdre A. G. Bishop, CBE, AFC, RAF. (1914-19: Lt Royal Marine Light Inf 1915-16; RNAS and RAF 1916-19.) AHQ Far East 1941; comd 225 Gp 1942. Regular air force offr; b. Gibraltar, 14 Jan 1897.

[9] AVM W. E. Staton, CB, DSO, MC, DFC, RAF. (1916-18: Artists' Rifles and 62 Sqn RFC and RAF.) Comd 10 Sqn RAF 1938-40, RAF Stn Leeming 1940-42; SASO Far East Cd 1942. Regular air force offr; of Burton-on-Trent, Eng; b. Derbyshire, Eng, 27 Aug 1898.

[1] Air Cmdre B. J. Silly, MC, DFC, RAF. (1914-18: Royal Fusiliers and RFC; comd 55 Sqn RAF 1918.) SASO HQ RAF Far East 1939-42; Dep AOC RAF Sumatra 1942. Regular air force offr; of Canterbury, NSW; b. Burwood, NSW, 28 May 1893. Died while a prisoner of war 7 Dec 1943.

[2] AVM S. F. Vincent, CB, DFC, AFC, RAF. (1915-19: RFC and RAF.) Comd RAF Stns Northolt, North Weald and Debden 1941; HQ Fighter Cd 1941-42; AOC 224 and 226 Gps 1942; special duties RNZAF 1942-43; AOC 13 Gp 1943-44; comd HQ 221 Gp ACSEA 1944-45; SASO Fighter Cd 1945. Regular air force offr; b. Hampstead, London, 7 Apr 1897.

[3] Air Cmdre H. J. F. Hunter, CBE, MC, RAF. (1914-19: Lt Rifle Bde 1914-15, RFC and RAF 1916-19; comd 9 Sqn and 15 Wing 1917, 42 Sqn 1918, 1 Wing 1918-19.) Comd RAF Stn Topcliffe 1940-42; AOC 225 Gp 1942, 221 Gp 1942-43, 223 Gp 1943-44. Regular air force offr; b. Chelsea, London, 29 Dec 1893.

temporarily to Java "when convenient", he declined to go until the last of his subordinates had gone.

In Sumatra it now became evident that there was no suitable site for the rear headquarters and Air Commodore Silly was instructed to move to Batavia where reinforcements and equipment were now arriving, and there take administrative charge of all air force units.

The enemy, flushed with success, was now taking every opportunity to batter the island's defences and was concentrating his bombing particularly on the dock area where the congestion of men, materials and ships was increasing daily. Some vessels had to be loaded at their moorings from lighters and those that docked did so at considerable peril. Dock labour, dispersed by the raids, had to be replaced by the troops themselves. Units became separated from each other and from their equipment, ships under heavy attack put to sea only partly laden, and much equipment, needed urgently by the Bomber Group in Sumatra, could not be loaded at all. Shipping losses on the route from Singapore south increased alarmingly and many precious lives and quantities of equipment, including 200 motor vehicles, were lost.

Apart from a few Hudson sorties for convoy protection and a sweep by Buffaloes to cover the evacuation of troops who had been cut off in the Batu Pahat area, air operations from Singapore were now almost entirely confined to those by the Hurricanes in their vain effort to defend the island. The squadron's aircraft strength was maintained at 10 by the units in Sumatra. The pilots were in combat daily and always against odds. Of those who survived, a majority were men who had had combat experience before coming to Malaya. Percival has recorded that the fighters remained on the island at his request, adding that he had made this request as much for morale as anything else.

An exception to the constant fighter operations occurred when, on 2nd February, the Swordfish flight attacked the airfield at Kluang where the Japanese had mounted a strong fighter force. That was the last strike by these staunchly-manned, out-dated aircraft. In no condition to make the flight to Sumatra, they were demolished soon afterwards to deny them to the enemy.

The six Buffaloes wasted away and in the first week of February No. 453 Squadron was transferred to Java. Another small unit which operated until enemy attacks on the 7th destroyed its aircraft, and ended a very valuable contribution, was No. 4 Photographic Reconnaissance Unit of Buffaloes which made more than 100 sorties, flying unarmed, often as far north as Singora.

On 5th February one more convoy (the last) reached Singapore Harbour. On its final stage from the Banka Strait reconnaissance aircraft and fighter patrols tended it continuously. One ship, the *Empress of Asia,* was attacked by nine dive bombers and set on fire. All the troops on board (part of the 18th Division) were rescued. This was the only ship lost from all the convoys to arrive. For this remarkable achievement

credit was due to the crews of the aircraft which provided cover on the approaches to Singapore, but an even more important factor was that the enemy squadrons (perhaps deliberately, at least in the late stage of the campaign) concentrated much more on the ships that were leaving than on those arriving.

Seletar, Sembawang and Tengah came under artillery fire, as expected, on 4th and 5th February. Kallang then became the defenders' only operational airfield and therefore received concentrated attention from attacking aircraft. By the 6th the 2,250-foot runway was so damaged by bomb bursts that pilots had great difficulty in taking off and landing safely.

The Japanese made their actual assault on the island on the 8th and as they pressed the defending ground forces back Far East Command's role in Singapore ended.

On the 10th Wavell returned to Singapore. One of his immediate decisions was to order a complete air force withdrawal. He instructed Air Vice-Marshal Maltby, then Assistant Air Officer Commanding, to take command in the East Indies immediately. Appointed by Abdair as Air Officer Commanding West Group, Maltby left Singapore by air that same day.

In a last and desperate effort to deprive the enemy of as much advantage as possible, airfield surfaces were ploughed up, and petrol and equipment stores demolished, secret radar and signals equipment receiving particular attention. But neither time nor manpower was available to permit thorough demolition and, even had they been, a large quantity of equipment must have remained untouched because it was housed in the city itself.

Pulford, who had to be persuaded by Percival himself that there was no longer a task for him in Singapore, reluctantly joined a party—about 40 in all—who, under the orders of Rear-Admiral Spooner, set out from Singapore in a fast patrol craft on the 13th. Percival has quoted Pulford's last words to him: "I suppose you and I will be held responsible for this, but God knows we did our best with what little we had been given." About 30 miles north of Banka Island and under enemy attack, their vessel was stranded on an island in the Tuju or Seven Islands Group.[4] With little food and no proper medical aid to combat the sickness that beset many of the party, they strove to exist until, after two months, a Japanese patrol landed and took them prisoners. But by this time eighteen of their number had died, among them the two gallant senior officers, Pulford and Spooner.

Throughout the campaign Pulford had striven selflessly and earnestly to fulfil the heavy responsibilities that had rested on him. Though, in the later stages of the campaign, his health broke down, he steadfastly refused to relax his duties. His death from starvation and illness was a symbol of a campaign in which the odds had always been too great. Two days

[4] Maltby, in his despatch, attributes the attack to enemy aircraft. Percival records a different version: the patrol boat was chased by a Japanese destroyer and forced aground on the island. The Japanese then dismantled the patrol boat's engine and left the party completely deserted and without supplies.—Maltby Despatch, para 394; Percival, pp. 285-7.

after Pulford set out on his last voyage, the fortress of Singapore surrendered. An end was written, on 15th February, to one of the most bitter and decisive defeats ever suffered by the forces of the British Commonwealth.

CHAPTER 18

THE FALL OF RABAUL

WHAT the Rabaul garrison recognised as "softening-up" raids by the Japanese were resumed on 16th January when 40 bombs were dropped by Kawanisi flying-boats. There was no very serious damage, but the raid was taken as a pointer to what might be expected. As it happened, "enemy aircraft overhead" reports came from various coastwatchers in the next few days including those at Tabar Island and Pondo. Wirraway patrols were maintained each day from first to last light but there were no sightings of consequence, though the crew of one aircraft on patrol north of Kavieng engaged a lone enemy flying-boat without causing it any visible damage. Then, at 12.14 p.m. on 20th January, the coast-watcher on Tabar signalled that 20 enemy aircraft were heading for Rabaul. About half an hour later the raid began and it soon became clear that this was no "ordinary" one. The 20 aircraft sighted from Tabar were quickly joined by a force of 33 bombers which, coming in from the west, were not seen until they were almost over the town area. Only five minutes later watchers on Duke of York Island reported another 50 aircraft approaching—heavy bombers and dive bombers with a fighter escort. The time recorded for the beginning of the raid was 12.48 p.m. Two Wirraways, piloted by Flying Officer Lowe, who had Sergeant Ashford[1] as his observer, and Sergeant Herring,[2] with Pilot Officer Claire[3] as observer, were on patrol. But at the first sighting five more Wirraways took off. Two were from Lakunai, one piloted by Sergeant Hewett,[4] with Flying Officer Tyrrell[5] as observer and the other by Flight Sergeant Milne[6] (observer, Sergeant Harber[7]). The other three were from Vunakanau, their pilots and observers, respectively, being Sergeants Blackman[8] and Woodcroft,[9] Bromley[10] and Walsh,[11] and Little[12] and Sheppard.[13]

[1] Sgt C. A. Ashford, 3210; 24 Sqn. Regular airman; of Enfield, NSW; b. Mortlake, NSW, 15 Aug 1915. Killed in action 20 Jan 1942.

[2] F-Lt G. R. Herring, 405410. 23, 24, 84 and 80 Sqns; Instructor 8 and 2 OTU's 1944-45. School teacher; of Balfe's Creek, Qld; b. Thursday Island, 19 Jan 1921.

[3] F-Lt A. G. Claire, 273495. 24, 23, 30 and 36 Sqns. Clerk; of Kedron, Qld; b. Mackay, Qld, 11 Apr 1913.

[4] Sqn Ldr W. O. K. Hewett, 407428; 24 Sqn. B. Bordertown, SA, 6 Sep 1921.

[5] F-Lt J. V. Tyrrell, 3491. 24, 32, 24, 30 and 37 Sqns. Regular airman; of Melbourne; b. North Fitzroy, Vic, 21 Aug 1917.

[6] F-Sgt M. G. Milne, 407586; 24 and 75 Sqns. Salesman; of Glenelg, SA; b. Glenelg, 25 Mar 1915. Killed in action 6 Jun 1942.

[7] F-Lt R. S. Harber, DFC, 32803. 24, 31 and 92 Sqns. Accountant; of Northbridge, NSW; b. Mosman, NSW, 18 Jan 1918.

[8] P-O R. A. Blackman, 402844; 24 Sqn. Book-keeper; of Strathfield, NSW; b. Binnaway, NSW, 24 Dec 1921. Killed in action 20 Jan 1942.

[9] Sgt S. E. Woodcroft, 22630. 23 and 24 Sqns. Insurance clerk; of Brisbane; b. Brisbane, 16 May 1918. Killed in action 20 Jan 1942.

[10] Sgt C. F. Bromley, 405391; 24 Sqn. Jackeroo; of Richmond, Qld; b. Sydney, 11 Mar 1922. Killed in action 20 Jan 1942.

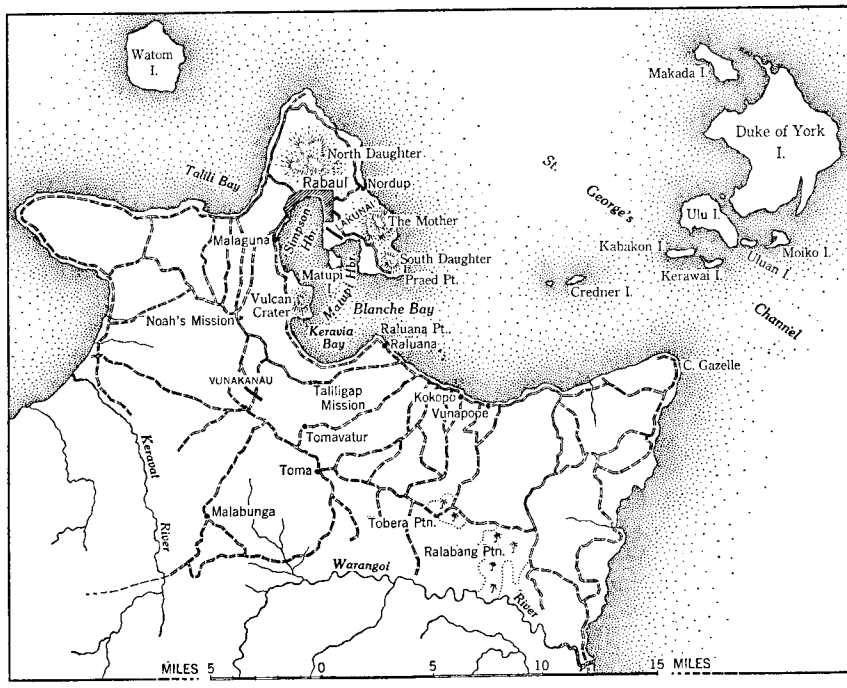
[11] Sgt R. Walsh, 5803; 24 Sqn. Cotton research student; of Toowoomba, Qld; b. Toowoomba, 27 Mar 1916. Killed in action 20 Jan 1942.

[12] F-Lt R. C. G. Little, 403059; 24 Sqn. Public servant; of Coogee, NSW; b. Richmond, Vic, 6 Dec 1914.

[13] W Cdr D. R. Sheppard, 288836. 24, 5, 4 and 30 Sqns. Salesman; of Adelaide; b. Adelaide, 31 Jan 1919.

Flight Lieutenant Anderson, who had been the first Wirraway pilot to engage an enemy aircraft, was taking off, with Pilot Officer Butterworth[1] as observer, when his engine failed and the aircraft crashed. Anderson and Butterworth were both injured and the aircraft had to be "written off".

There was some cloud over Vunakanau but the sky was perilously clear over Lakunai as those on the ground watched anxiously while the Wirraways that had been on patrol turned to meet the enemy. The main bomber formation was at 10,000 feet with Zeros flying cover for it. Lowe and Ashford were soon in combat with more than six Zeros. The engagement was brave but hopeless and the end came soon when the



Wirraway, completely outclassed in speed, manoeuvrability and fire-power, was shot down in flames from 5,000 feet. By this time Herring and Claire were also in grave trouble. After brief, one-sided combat with several Zeros, the Wirraway went into a spin, but Herring managed to regain control just in time to make a crash landing at Lakunai. Both pilot and observer had been wounded in the legs by enemy gunfire.

As bombs began to burst on the airfield the other five Wirraways were still climbing for sufficient altitude from which to make combat at all possible. As Hewett and Tyrrell reached position for an attack on one

[1] F-Lt C. A. Butterworth, 263496. 24 and 32 Sqns, 529 Sqn USAAF and 23 Sqn; CGI 5 OTU 1942-44. Clerk; of Croydon, NSW; b. Marrickville, NSW, 19 Jan 1919.



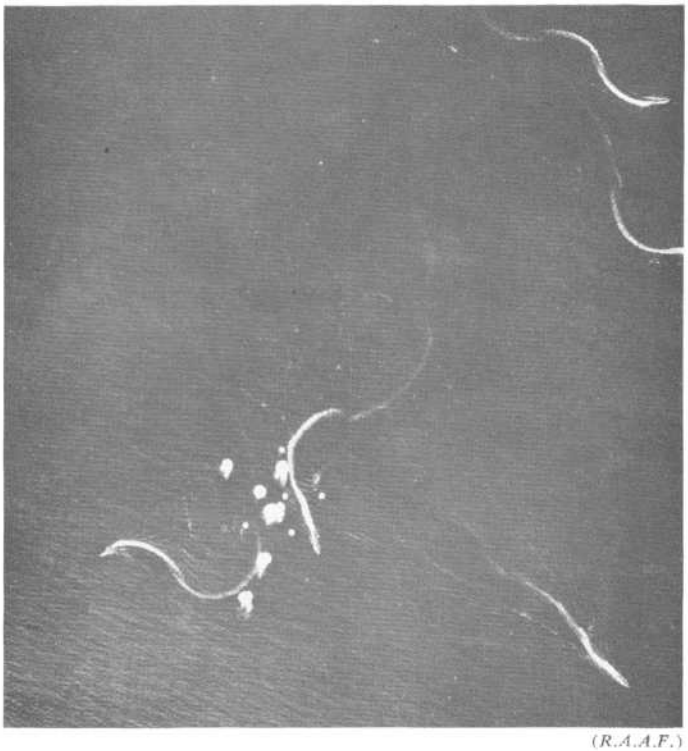
(*Australian War Memorial*)

Air Chief Marshal Sir Charles Burnett, Chief of the Air Staff, congratulating Air Vice-Marshal W. D. Bostock on his appointment as Chief of Staff, Allied Air Forces, S.W.P.A., on 2nd May 1942.



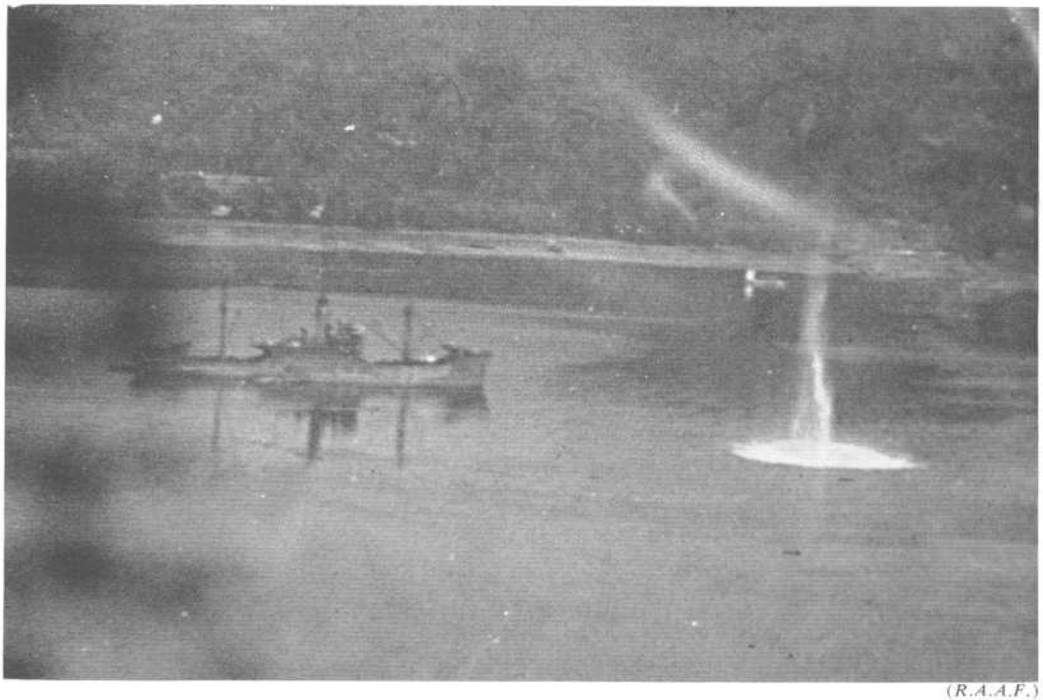
(*R.A.A.F.*)

Air Vice-Marshal George Jones, Chief of the Air Staff (seated), with senior R.A.A.F. officers on 7th May 1942, after his appointment on the 5th May. Left to right the four officers are: Gp Capts C. S. Wiggins, Director of Communications; A. L. Walters, Assistant Director of Operations; V. E. Hancock, Assistant Director of Plans; and Air Cmdre J. E. Hewitt, Director of Intelligence.



(*R.A.A.F.*)

Japanese shipping taking avoiding action while under attack by Allied Air Forces on 8th May 1942, during the Battle of the Coral Sea.



(*R.A.A.F.*)

A surprise attack on Japanese shipping at Ambon by 9 Hudsons of No. 2 Squadron on 13th May 1942. One Hudson and crew captained by P-O J. H. Venn were lost when, in his mast-head attack, Venn's aircraft exploded simultaneously with the 3,000-ton ship which he hit and sank.



(*R.A.A.F.*)

A reconnaissance photograph, taken at 21,500 feet, showing the results of bombing by Allied aircraft of Japanese installations at Lae on 14th May 1942.



(*R.A.A.F.*)

The *Macdhui* on fire in Port Moresby harbour after being bombed on 18th June 1942.



(*R.A.A.F.*)

Pilots of No. 75 Squadron at Port Moresby, August 1942. From left to right: F-Lt L. D. Winten, Sqn Ldr L. D. Jackson, commanding officer of the squadron, and F-Lt J. W. W. Piper and F-O P. A. Masters.



(*R.A.A.F.*)

The Minister for Air, Mr A. S. Drakeford, and Sqn Ldr K. W. Truscott, commanding officer of No. 76 Squadron, at Strauss, Northern Territory, during a visit by Mr Drakeford to North-Western Area in November 1942. Sqn Ldr Truscott (third from left): Mr Drakeford; Mr M. C. Langslow, Secretary, Department of Air; and Air Cmdre F. M. Bladin, Air Officer Commanding, North-Western Area.

of nine enemy flying-boats in formation, a Zero dived on them. Hewett stalled the Wirraway out of a turn but the Zero pilot was waiting for him as he pulled out of it and raked the Wirraway with cannon fire. Pieces flew off the wings and fuselage and a bullet smashed Hewett's knee. He temporarily lost consciousness and the Wirraway went into a spin. Tyrrell, who had been standing up at his gun, was flung from the cockpit. He later recalled clutching desperately for the ripcord of his parachute which opened suddenly without his aid—apparently the cord had caught in the cockpit as he fell. He came down into the branches of a tree about 14 miles from the airfield and, after walking some distance, was picked up by a party of A.I.F. men who were searching for a supposed Japanese parachutist.

Hewett, despite his wound, had succeeded in pulling the Wirraway out of its spin. A friendly cloud helped him to evade a Zero that had followed him down to 4,000 feet, and he made a crash landing at Vunakanau without further injury to himself though his aircraft was severely damaged. Bromley and Walsh both lost their lives when their aircraft was shot down and crashed into the sea near Praed Point, an eminence on which the two 6-inch coast guns had been placed. Later a salvage party found that Bromley had been killed by a bullet. Blackman and Woodcroft were last seen in combat with several Zeros. No further report of them was received and the toll to the squadron mounted as they were listed as missing, believed killed; the most likely explanation was that they too had been shot down into the sea. Milne and Harber and Little and Sheppard made the best possible use of what cloud cover there was and engaged in a grim game of "tag" with a greatly superior force of Zeros. Little finally landed with part of his Wirraway's tail plane shot away and Milne came in safely with his aircraft undamaged. All 4 airmen escaped unhurt. The whole action had lasted less than 10 minutes. In that time, in the 8 crews that had taken off, 6 of their number had been killed and 5 wounded or injured. Three of the squadron's total of 8 Wirraways had been lost in combat, one completely wrecked in a crash just after take-off, and 2 seriously damaged in crash landings.[2]

With no air opposition left the Japanese formations continued to blast the base, striking at the shipping in Simpson Harbour, the wharf area and the two airfields. High-level bombing was followed by low-level fighter sweeps, the Zero pilots alternating bursts of gunnery with taunting

[2] It has since been asserted that the action in which the Wirraways were lost on 20th January was the result of a misconception of his role by Lerew, the argument being that the Wirraways should have been used from alternative airfields as dive bombers against the enemy aircraft carriers. Apart from the extreme improbability of Wirraways with their quite inadequate performance and fire-power, being able to reach such targets before being shot down, and apart from the very reasonable doubt that the bombs they might have used (250-lb) would have been effective had they succeeded in scoring direct hits, what could 8 Wirraways have achieved, even with great good fortune to aid them, against the anti-aircraft fire of the carriers and their escort warships, plus the carriers' patrolling aircraft and land-based fighters? Further, the sightings of the enemy's invasion force were not reported until the day after the crushing air raid on Rabaul. Had the Wirraways not taken off to meet the enemy air attack—on the assumption that they were to be saved for dive-bombing operations—their chances of surviving the enemy's bombing and gunnery were remote, to say the least, for there were no adequate dispersal facilities or shelter pens.

aerobatic displays, and then the dive bombers came in. The anti-aircraft guns retaliated to the best of their ability, the crew of one scoring a direct hit on a heavy bomber which crashed into "The Mother", one of Rabaul's volcanic features, about four miles from the town. Several more hits were registered on other bombers but failed to bring them down, at least within sight of the gunners. Buildings at Vunakanau were severely damaged and in the harbour a coal lighter was sunk and the Norwegian merchant ship *Herstein* was hit, torn from her moorings and set on fire, so that she drifted, blazing fiercely and utterly helpless. One of the Wirraways that had made a crash landing was attacked by enemy fighters until it burst into flames and was destroyed. Suspecting that there were troop encampments among the coconut groves round Lakunai, the enemy fighters raked the area with gunfire while the dive bombers dropped light anti-personnel bombs, but in these attacks they failed to hit anybody.

The first word received by North-Eastern Area Headquarters of this big air attack was a signal which read:

> Waves of enemy fighters shot down Wirraways. Waves of bombers attacking aerodromes. Over one hundred aircraft seen so far. Front seat gunnery on Praed Point.

Lerew then signalled:

> Sending A16-38 [a Hudson aircraft that had been under repair in a dispersal area] to Moresby with casualties. Two Wirraways useless defence. Will you now please send some fighters?

The reply—"Regret inability to supply fighters. If we had them you would get them"—was the first signal Lerew had received that contained some note of appreciation not only of the situation but of what he and his diminutive force were enduring. He signalled back:

> Wirraways and Hudsons cannot be operated in this area without great loss and sacrifice of skilled personnel and aircraft. Pilots and aircraft as good as equivalent types of Japanese aircraft doing most damage.[3] One squadron Type 0 fighters [providing cover] enables others to operate. As fighters cannot be obtained only one course if services of trained personnel valued.

Only 3 undamaged aircraft remained—2 Wirraways and one Hudson. Lerew therefore began to withdraw to Vunakanau what forces and equipment he had left at Lakunai.

Early on the morning of the 21st it was reported that 4 enemy cruisers had been sighted 65 miles south-west from Kavieng steaming on a course towards Rabaul. A later message stated that the cruisers were accompanied by "other vessels". At 4.30 p.m. Lerew received a signal ordering that all available aircraft were to attack these ships. "All available aircraft" added up to the single Hudson and possibly a damaged Wirraway at Lakunai which might be made serviceable as a dive bomber.

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[3] The reference was to the Japanese dive bombers.

Flight Lieutenant Brookes and an armourer went to inspect it only to find that the bomb-racks had been removed so that it could be used as a fighter. Meanwhile the Hudson, which had been successfully concealed from the raiders in a large clump of trees some distance from the Vunakanau runway, was wheeled out along what was more a quagmire than a taxi-way with the aid of about 100 natives. The crew—Squadron Leader Sharp[4] (pilot), Flight Lieutenant McGrill[5] and Sergeants Vaughan[6] and Downes[7]—prepared for their formidable mission. The composition of the enemy force was now reported to be 2 aircraft carriers, 3 or 4 cruisers, a number of destroyers and between 5 and 7 transports. Once the aircraft was ready they took off but before they could reach their target night had come and they were forced to return without sighting the enemy ships.

Army engineers now began demolitions at Lakunai and at Vunakanau the runway was mined with 250-lb bombs to which an electric exploder was connected. The withdrawal from Lakunai was completed by 5 p.m. Conditions at Vunakanau were bad; the water-supply was doubtful and with facilities and buildings smashed by bomb explosions, messing arrangements were difficult and inadequate. Then a signal was sent from R.A.A.F. Headquarters through Port Moresby ordering the evacuation of all aircrew.[8] Apart from the one Hudson which was to take the wounded out, there were only 2 aircraft for this purpose—2 Wirraways. That same evening Little and Harber and Milne and Sheppard, left in these aircraft for Port Moresby by way of Lae, arriving there safely next morning. The only aircrew members Lerew had left were those belonging to the Hudson and his second-in-command, Brookes. He was now convinced that the position in Rabaul was hopeless. In a letter dated 12th December from Northern Area Headquarters, as it then was (and the senior staff officers were unchanged) consideration had been given to the possibility of just such a position. The letter contained this paragraph:

> You are to be quite clear that, if the situation warrants it, e.g. a sudden attack on Rabaul, you are to take immediate and appropriate action, and that this action is at your discretion. If Rabaul is invaded it will be necessary to carry out a combined operation to extricate your own force.

With this in mind, and aware of the limitations of the force he now commanded, Lerew considered that nothing could be gained, and perhaps much lost, by trying to turn these airmen into soldiers in a few hours. He therefore sent this signal to A.C.H. Townsville, for repetition to the Air Board and Port Moresby:

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[4] Sqn Ldr J. Sharp, 225. 23, 24, 32 and 14 Sqns; SO Training RAAF Stn Darwin 1943-44. Regular air force offr; of Kogarah, NSW; b. Goulburn, NSW, 24 Sep 1918.

[5] Sqn Ldr F. R. McGrill, 575. 23, 24 and 32 Sqns; Controller 9 Gp 1943, 73 Wing 1943-44. Regular air force offr; of Sydney; b. Sydney, 17 Jun 1918. Killed in aircraft accident 11 Dec 1944.

[6] F-O H. V. Vaughan, 400574. 23, 32 and 102 Sqns. Accountant; of Geelong, Vic; b. Larpent, Vic, 6 Nov 1911.

[7] F-O H. M. Downes, 11090. 24, 32 and 37 Sqns. Sound technician; of East Brunswick, Vic; b. Penshurst, Vic, 10 Feb 1919.

[8] Lerew says this signal was not received.

My orders were to take action if necessary in the event of attack. In consultation with Army and Navy [have] holed all fuel drums and destroyed publications. This necessary as Army cannot protect and you have given no indication any possible chance defend Rabaul. In meantime air force personnel stand every chance of being cut off. RAAF willing fight with Army but Army cannot handle untrained personnel. These men will be required by RAAF before long.—Lerew.

The reply was:

From AOC to Wing Commander Lerew. Begins. Rabaul not yet fallen. Assist Army in keeping aerodrome open. Maintain communications as long as possible. Ends.[9]

But, if the style of communications between Australia and Rabaul had first been set in the grand manner by the "Empire expects . . ." message from Townsville, the last word in heroic vein was Lerew's. The reply to his earlier signal was a rebuff to the discretion he had been specifically instructed to use in such a situation. The imp reappeared. Mixing raillery with a measure of very grim fact, he sent his final signal from Rabaul. When it reached Melbourne the cipher staff was puzzled until someone with a knowledge of Latin solved their problem by "decoding" the message—"*Nos morituri te salutamus*"—into the English translation of the Roman gladiators' salutation—"we who are about to die, salute you!" Little more than three hours later there was a reply. It was very strictly "Service" though its clear intention was that the chief gladiator was to be removed from the arena. It read:

Wing Commander J. M. Lerew to proceed Moresby to command Hudson squadron consisting of single flights from 24 Squadron, 23 Squadron, 6 Squadron. Squadron to be given provisional number by Air Board. Flight Lieutenant W. D. Brookes to assume command of 24 Squadron Rabaul detachment and is granted [rank of] Acting Squadron Leader as from 22 January.

But if, as it seemed, it was intended that Lerew should obey this order immediately, several factors had not been appreciated. One was that he had planned the evacuation of the wounded in the only aircraft that could take him out, and he had no intention of occupying precious space in it. There was also his conviction that, so far as the defence of Rabaul was concerned, the end was very close and, if any of his force was to escape as he intended and planned that they should, all the cooperation and leadership possible would be needed. He therefore read this latest signal with his "blind eye". At 3 a.m. on the 22nd Sharp, his Hudson filled with wounded men, took off from Vunakanau. Two or three lights placed at the far end of the runway were his only guide. Just after the Hudson became airborne one engine faltered, but it picked up again, and four hours later the overworked aircraft reached Port Moresby safely. After refuelling Sharp set off for Townsville. When about half the distance had been covered the faulty engine stopped altogether. All guns, ammunition and movable equipment were hurriedly jettisoned. For an hour and a

[9] Lerew considered that this signal did not take into consideration the time needed for carrying out demolitions.

half Sharp kept the Hudson flying on one engine until he was over Cooktown where he was able to make a safe forced landing. A new engine cylinder was flown to Cooktown and the Hudson, which had flown for 100 hours without even an engine inspection, was able to complete the journey to Brisbane, its burden lightened by the transfer of three patients to the aircraft that had brought the new cylinder.[1] As the pilot of the last aircraft to leave Rabaul before the invasion, Sharp carried about 300 letters, some of them in envelopes, some without.

At 7.41 on the 22nd—when the Hudson had landed safely at Port Moresby—the men who had written those letters were again under air attack, this time from 45 fighters and dive bombers. The damage was extensive. The fixed defences had now been silenced, including the 6-inch guns on Praed Point. Coastwatchers now reported the enemy convoy to be only about 20 miles away—off Watom Island to the north-west of Rabaul. With no effective weapons with which to repel any strong invasion force at the beach-head, some of the troops began moving back supplies of food and ammunition. Such few installations as had not already been wrecked were demolished and petrol dumps, stores and the operations room set on fire. Bomb detonators were thrown into the jungle in small quantities so that the remaining bombs could not be used readily. The civilians, numbering between 500 and 600, scattered into the bush.

Lerew conferred with Colonel Scanlan,[2] the commander of the garrison. While he was anxious that the remainder of his squadron should give any worthwhile aid they could, he knew their limitations. Some were no longer young, most were unarmed, few had fired more than five rounds from a service rifle and none had had any field training. The moral issue was difficult but Scanlan agreed that Lerew should accept the terms of his earlier instruction and use his own discretion. He therefore decided to evacuate his force, but with two qualifications—he must first be quite certain that the enemy did intend to invade Rabaul and he must also be sure that he did not leave Vunakanau airfield while there was a likelihood that the Japanese would send in paratroops. In the early afternoon he again conferred with Scanlan. There was no longer any doubt that Rabaul would soon be invaded and it seemed equally certain that the enemy was as aware as they were that paratroop landings would be superfluous. Lerew assembled his men, told them frankly of the situation and of his own position and received their assurances of cooperation and obedience to his orders. It was then about 3.30 p.m. A signal intended for transmission to Port Moresby announcing that the evacuation plan was to be carried out was drafted and coded, but the "keying" line to the transmitter had been broken and the signal could not be sent. Earlier, both North-Eastern Area Headquarters and Port Moresby had been informed

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[1] "In Rabaul inspections were done at night and every effort was made to keep aircraft serviceable. Except for enemy action close to 100 per cent serviceability—i.e. better than under peacetime conditions—was maintained."—Lerew.

[2] Col J. J. Scanlan, DSO, TX16307. (1st AIF: 7 Bn 1914-16; comd 59 Bn 1918.) Comd HQ NG Area 1941-42. Deputy Governor, Hobart Gaol; b. Albert Park, Vic, 19 Oct 1890.

of probable points at which survivors might be picked up if evacuation became necessary. One radio operator, Sergeant Higgs,[3] voluntarily left the rest of the squadron and set out alone for Wide Bay, where he knew of a plantation that had a teleradio set. He found that, though the plantation homestead had been abandoned, the teleradio set was still serviceable. Setting it for the Port Moresby frequency and using a code he had memorised, he transmitted this message:

24 Squadron party at No. 1 base. Send flying-boats. They will identify themselves with torch.

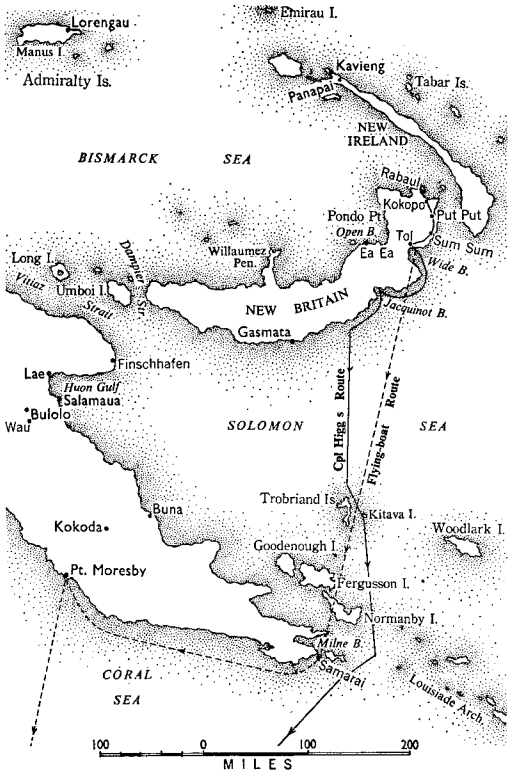
In a convoy of eight motor trucks Lerew's party, which included the staff of the advanced operational base under Flying Officer Robinson, left Rabaul immediately after the decision to withdraw had been made. There was considerable enemy air activity at the time but as they reached the open country the north-west monsoon came down bringing blinding rain which effectively screened their convoy from detection from the air. The first objective was the Warangoi River. Considerable portions of the route lay along the south-east coast with consequent risk of interception should the Japanese land at some point ahead of them. About 4 p.m. they passed through Kokopo. On the way several civilians and a few army troops joined the convoy bringing its strength to about 150. The mouth of the Warangoi River was reached about 5.30 p.m. Here the trucks were dismantled and made useless because there was no way of getting them across the river. The crossing proved a slow and anxious task. The stream was in full flood and two native canoes were the only available craft. It was necessary to go some distance to seaward, cross a bar, and then struggle back against the current to reach the other side. This operation continued throughout the night. Here Lerew separated into three parties the married men who had children, the married men without children and the single men. The next stage was to Put Put plantation. The way led along a jungle path in heavy rain. A swollen stream had to be crossed, the men alternately wading and swimming. At Put Put food was obtained. Here Lerew commandeered a ketch and, placing the married men's parties, numbering 33, under the command of Brookes, instructed them to sail the ketch by night round the coast to Tol plantation in Wide Bay. This they did successfully, reaching the plantation about 11.30 a.m. next day.

The main party faced the difficult task of getting across the bay at Put Put. A single native canoe that could take but two men at a time was, at first, their only ferry. An attempt to make a raft from fuel drums was unsuccessful, but eventually the plantation owner arrived in a small launch in the dinghy of which he towed the rest of the party across three men at a time. They then moved on to a mission station about two miles away. Next day they tramped on, still in almost continuous rain, along the

[3] F-Lt F. G. Higgs, BEM, 265705. 24 Sqn, North-Eastern Area HQ, 22 OBU and 13 SU. Cost clerk; of Woonona, NSW; b. Carcoar, NSW, 10 Oct 1904.

beach and across many swift streams. After about 15 miles they reached Sum Sum. It was then about 5 p.m. A few minutes later aircraft were heard and the whole party was ordered to take cover. But the aircraft proved to be two R.A.A.F. flying-boats. Immediately there were frantic efforts at signalling from the beach. These were seen and accepted as genuine by the flying-boat captains, Flight Lieutenants Grey[4] and Mather.[5]

Both aircraft had left Port Moresby at 3.15 p.m. on the 22nd, to attempt an evacuation operation. While on their way they received word that Rabaul was being attacked by enemy aircraft so they diverted course to Samarai on the extreme south-eastern tip of Papua, where they stayed overnight. Taking off soon after 2 p.m. next day they flew along the southern coast of New Britain until they saw Lerew's party signalling to them. After all equipment had been destroyed—rifles were thrown into the sea—to lighten the burden of the flying-boats as much as possible, 50 men were taken out to Grey's aircraft and 46 to Mather's. Only a small party of airmen remained. These men, at Lerew's orders, set out in a yacht they found moored at Sum Sum, to sail to Tol and inform Brookes of the main party's evacuation and tell him that arrangements were being made to rescue his own party. At 7.22 p.m. the flying-boats took off and three hours later they alighted at Samarai aided by a flare path which Squadron Leader Cohen had laid for them.



Escape routes from New Britain

The airmen who had left Sum Sum in the yacht arrived in Wide Bay safely on 24th January. They found Brookes and his men subsisting on native food and most of them suffering from dysentery. That evening Flight Lieutenant Grey brought his flying-boat down off Tol and took

[4] Sqn Ldr J. L. Grey, AFC, 261514. 11 Sqn; comd 33 Sqn 1942, 41 Sqn 1942-43. Commercial pilot; of Townsville, Qld; b. 9 Mar 1915.

[5] Sqn Ldr M. V. Mather, AFC, 260486. 11, 33 and 41 Sqns; Qantas Merchant Air Service. Commercial pilot; of Sydney; b. Abingdon, Berkshire, Eng, 29 Jul 1905.

on board 25 members of the R.A.A.F. and 24 others—a party of army signallers who had become separated from their main force, and the remainder of the civilians. Again the flying-boat alighted at Samarai by night. On the 25th Cohen flew a Catalina carrying 35 members of the R.A.A.F. and a quantity of gold bullion from Samarai to Port Moresby, and next day Mather took 42 passengers and Grey took 22 to Townsville.

Several members of No. 24 Squadron had not been evacuated. One was Sergeant Higgs, still standing by at the plantation teleradio. He had heard nothing for three days and then came the news he was waiting for:

> To Higgs. Good show. The job is done. All safe. Make a break for home. Good luck. Lerew.

Higgs then quickly appropriated an 18-foot sailing boat, and, with two airmen whom he had picked up on the way to the plantation, set a course for Gasmata. His only navigation aids were a compass taken from a Wirraway and a school atlas. Approaching Gasmata an enemy aircraft carrier was sighted but by changing course he avoided detection. Three times enemy aircraft made attacks on the boat but each time it escaped. Calling at Samarai and several other islands for food and rest, the small party continued sailing until, 21 days out from Wide Bay, they arrived safely at Cairns.

There were now only three members of No. 24 Squadron about whose safety there was doubt. Warrant Officer Kelly,[6] a service photographer, was in hospital at the time of the withdrawal and was too ill to be moved. He remained behind and, with other patients and the gallant members of the hospital staff who stayed to care for them, was taken prisoner. Flying Officer Lempriere,[7] the squadron's Intelligence Officer, had risked being left behind to ensure that the signals office and its contents were destroyed. He reached Put Put after the main party had left and was captured some time later off Gasmata while trying to escape in a launch. The third man who had not escaped was Corporal Smallpage,[8] a signaller who voluntarily returned from the Warangoi River to endeavour to find a box of secret documents believed to have been left behind. He was not reported again and was later listed as missing.

Major-General Horii's *South Seas Force* began to disembark in Simpson Harbour at 2 a.m. on the 23rd. The force, about 5,300 strong, operated under the direct command of the Imperial G.H.Q. It included the *144th Regiment* (from the *55th Division* then in action in Burma), an engineer regiment and elements of a *Special Naval Landing Force,* part of which had been detached to take Kavieng.

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[6] W-O J. F. Kelly, 882; 24 Sqn. Regular airman; of Brisbane; b. Brisbane, 1 Aug 1904. Drowned in sinking of *Montevideo Maru* 1 Jul 1942.

[7] F-O G. R. Lempriere, 262789. (2nd AIF: 1st AA Regt.) 24 Sqn. Wool broker and company director; of Sydney; b. Melbourne, 3 May 1904.

[8] Cpl R. C. Smallpage, 17462. HQ Northern Area, HQ Port Moresby and 24 Sqn. Prospector; of Kalgoorlie, WA; b. Broad Arrow, WA, 24 Oct 1900. Died while prisoner of war 4 Apr 1942.

In this latest movement on the extreme left of the Japanese southward advance the *South Seas Force* had naval cover from Vice-Admiral Inouye's *Fourth Fleet*—8 cruisers, 12 destroyers and 9 submarines—and air cover and support from the *24th Air Flotilla* and *5th Carrier Division—Shokaku* and *Zuikaku*. The *24th Flotilla* had approximately 27 bombers, 24 fighters and 10 Mavis flying-boats; and the *Carrier Division,* one of three divisions that made the assault on Pearl Harbour, had a strength of about 120 aircraft between the two ships. These were the aircraft that had made the pre-invasion bombing and fighter attacks on Rabaul and Kavieng and raided the northern Papua-New Guinea aerodromes.

Japanese Intelligence information on Rabaul was poor and a staff officer was flown over the base to add whatever he could by direct observation. The enemy's assessment of the Australian garrison's strength was: 3 large aircraft, 3 medium aircraft and 5 (plus) fighters with 500 troops whose number could be increased to 1,500 by adding the Volunteer Defence Corps and the police force.[9]

As most of the defending force had withdrawn to positions south of the harbour the landing was virtually unopposed, though a company engaged the Japanese at Vulcan on the Australian left flank. In a spirited fight this little force accounted for most of the enemy's total casualties of 16 killed and 49 wounded. The invaders' engineer regiment immediately went to work to fit the Vunakanau and Lakunai aerodromes for reinforcing aircraft units expected to arrive by the end of the month.[1] Meanwhile the ground troops went about their task of establishing their latest and most vital base in the South-West Pacific Area.

The operational burden on the crews of the flying-boats of Nos. 11 and 20 Squadrons at this time could hardly have been heavier. The range and capacity of the Catalina ensured it constant sorties in this vast area of ocean, islands and waterways. The War Cabinet agreed that an order should be placed in the United States for the delivery of nine more of these aircraft and sought the good offices of the British Government to hasten delivery. That was on 20th January. On the 21st one of No. 11 Squadron's Catalinas, captained by Lieutenant Hutchinson, had been sent on patrol between Samarai and Lae. With the American pilot as crew were Flying Officer Rowe[2] (second pilot) and seven others. While the Catalina was still on patrol an emergency signal from Salamaua reported to Port Moresby that enemy fighters were over that base. As the Port Moresby operator was about to send a warning signal to Hutchinson he received one from him instead—"Being attacked by five fighters." A period of silence followed and then came a further signal,

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[9] The enemy regarded their pre-war surveys of this area with suspicion because the reports on Guam had proved very inaccurate.

[1] At the end of January the *25th Air Flotilla* began moving to Rabaul to assume active operations in the New Guinea area.

[2] F-O T. N. Rowe, 400293; 11 Sqn. Student; of Wallinduc, Vic; b. Armadale, Vic, 2 Oct 1919. Killed in action 21 Jan 1942.

simply, "On fire." That was Hutchinson's last signal for the Catalina was shot down in flames. A ground patrol from the Australian New Guinea Administrative Unit (ANGAU) found the wreckage later in the jungle between Lae and Salamaua. There was one survivor, Corporal Keen.[3]

When within about 40 miles of Lae, and flying at 1,000 feet, 12 enemy fighters were sighted flying in the opposite direction. Five of them attacked. Keen, who was manning a gun in one of the side "blisters" (an egg-shaped transparent hood that gave the gunner an increased field of vision), watched the fighters approach, holding his fire until they came within range. Then the leading aircraft opened fire and the blister was shattered. Keen replied and continued to fire as a row of bullet holes appeared in the fuselage alongside him. He saw the leading enemy aircraft falter and go into a dive and Rowe shouted, "You've got him!" Keen then realised that the Catalina's cabin was on fire. The Catalina began to lose height and the flames were now licking into the blister and on to Keen's back. It was impossible for him to get back into the cabin. He pulled on his parachute harness and baled out. One enemy fighter followed him down, the pilot shooting at him, but Keen escaped and landed unhurt in the jungle about a mile from where the flying-boat crashed. Natives found him and took him to a mission station, and ten days later he returned to Port Moresby. This was the first reconnaissance aircraft and the first Catalina shot down by enemy fighters in the Pacific area, a sad distinction and gained by a time margin of only about two hours.

On the same day a No. 20 Squadron Catalina was on reconnaissance when its crew sighted 4 enemy cruisers 65 miles south-west from Kavieng —it was they who gave warning that Rabaul was about to be invaded. Their signal added that they were within range of the warships' anti-aircraft fire. This message was received at Port Moresby at 12.41 p.m. At 2.16 p.m. the pilot, Flight Lieutenant Thompson,[4] was ordered to proceed to Salamaua. About half an hour later a signal was received from the aircraft stating only, "Rudder gone."[5]

The "Cat-boats", as they were affectionately dubbed, were not only needed for reconnaissance, they formed the only striking force that the R.A.A.F. possessed at this time capable of reaching the enemy at Rabaul. When the signal came, warning of the approach of the Japanese convoy when it was near Watom Island, 5 Catalinas were detailed for a night attack. One aircraft was damaged in take-off and could not proceed. The other 4—2 from Port Moresby, one from Gizo and one from Tulagi—searched the area in darkness and bad weather without result. Thus the

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[3] Sgt T. H. Keen, 9351. 11 and 33 Sqns and 2 FBRD. Mechanic; of Gladstone, Qld; b. Townsville, Qld, 25 Jul 1915.

[4] Gp Capt R. H. Thompson, 461. 11 and 20 Sqns. Regular air force offr; of South Fremantle, WA; b. Boulder, WA, 8 May 1917.

[5] It was later learned that the aircraft had been shot down by anti-aircraft fire. Two of the crew were drowned but Thompson, F-Lt P. M. Metzler (the second pilot) and the rest of the crew, after being in the water for two and a half hours, were picked up by a Japanese cruiser and became prisoners of war.

enemy was able to reach Rabaul unscathed. But in a night attack on 24th January, five Catalinas bombed the ships in Simpson Harbour. Cloud obscured the target for most of the time but the bombing was directed against the points from which the anti-aircraft fire came and the crews —captained by Squadron Leader Price, Flight Lieutenants Beaumont and G. E. Hemsworth, and Flying Officers Norman[6] and Higgins[7]—returned to report probable hits. Again on the night of the 26th, 3 Catalinas piloted by Hemsworth, Higgins and Flying Officer Duigan,[8] returned to the attack. Higgins reported a possible hit on an aircraft carrier and Duigan, who was over the target an hour later than the others, reported a ship blazing fiercely on the north-west side and another burning near the centre of the harbour.

There was a variation in these operations on 27th January when Cohen piloted a Catalina on a reconnaissance and attack mission to Kavieng. As the flying-boat approached the target three enemy fighters attacked. The lesson from the loss of the two Catalinas on the 21st could not be ignored. Cohen promptly jettisoned his bombs, turned steeply into a cloud bank and, evading the Japanese fighters, returned safely to Samarai. Rabaul was again attacked by four Catalinas on the night of 28th January. The results were not observed. On the 30th, aircraft captained by Price, Norman, Hemsworth, Higgins and Flying Officer Bolitho,[9] made the squadron's fourth attack in which a direct hit was scored on one ship causing, as Higgins reported later, "a red glow which quickly increased in intensity". The other crews reported that they had been unable to see the results of their bombing because they had been blinded by the glare of the searchlights. This time the anti-aircraft fire was heavier and more accurate than on the earlier raids.[1]

The composite squadron (soon to become No. 32 General Reconnaissance Squadron) to which Lerew had been formally and summarily posted had its origin partly in the concern which R.A.A.F. Headquarters felt for the need to strengthen its forces at Port Moresby. The first flight (four aircraft) of the new unit, that from No. 6 Squadron at Richmond, flew to its new base on 22nd January. The pilots were Flight Lieutenants Pedrina[2] and J. B. Hampshire[3] and the two pilots who had been assigned

[6] F-O A. L. Norman, 407006. 11 and 20 Sqns. Stores assistant; of Torrensville, SA; b. Torrensville, 29 Dec 1915. Died while prisoner of war on or after 4 Nov 1942.

[7] F-Lt B. H. Higgins, DFC, 400620; 11 Sqn. Journalist; of Wangaratta, Vic; b. Wangaratta, 3 Aug 1914. Killed in aircraft accident 24 May 1943.

[8] F-Lt T. L. Duigan, DFC, 400082. 11 Sqn, 380 Gp and 21 Sqn; Instructor OTU Rathmines 1943-44. Architect; of Colac, Vic; b. Kyneton, Vic, 16 Dec 1916.

[9] Gp Capt W. K. Bolitho, DFC, 407016. 20 Sqn; comd 11 Sqn 1944-45. Bank clerk; of Hackney, SA; b. Adelaide, 11 Feb 1913.

[1] The burden of operations which the Catalina crews were accepting at this time is indicated in the squadrons' statistics for December 1941 and January 1942: *December*: No. 11 Sqn—100 sorties, 778 flying hours; No. 20 Sqn—126 sorties, 983 flying hours. *January*: No. 11 Sqn—115 sorties (37 in attack), 1,113 flying hours (559 on attack missions); No. 20 Sqn—86 sorties (31 in attack), 890 flying hours (493 on attack missions). Total for both squadrons for two months—427 sorties and 3,764 flying hours.

[2] Sqn Ldr W. A. Pedrina, DFC, 264. 13, 6, 32 Sqns and 1 OTU (New Guinea Transport and Supply Flight). Regular air force offr; of Hamilton, Vic; b. Hamilton, 20 May 1919. Killed in action 15 Dec 1942.

[3] W Cdr J. B. Hampshire, DFC, 392. 12, 13, 6 and 32 Sqns; comd 24 Sqn 1944-45, 25 Sqn 1945. Regular air force offr; of Lindfield, NSW; b. Sydney, 30 May 1918.

the Truk reconnaissance mission, Flight Lieutenant Yeowart and Flying Officer Green. These two were still flying their long-range Mark IV Hudsons, a fact that led to Yeowart's being sent on a reconnaissance sortie to find out what enemy forces were in Rabaul Harbour. On the afternoon of the 23rd, with a crew of three, he took off. When the Hudson came out of the overcast over Rabaul he counted 14 transports lying in Simpson Harbour and, just outside, there was an aircraft carrier from which fighters were taking off. Near at hand a cruiser and a destroyer were escorting a large transport into port. Having climbed to 17,000 feet, Yeowart was just drafting a sighting report for transmission to Port Moresby when Sergeant Henry,[4] in the upper turret, reported six Zeros closing on them from 3,000 feet above. Yeowart, to gain speed and shake them off, dived into a storm cloud, emerging at 7,000 feet at a speed of about 300 knots. He continued the dive until almost tree-top level and, for the next half hour, circled under a low cloud. Having thus evaded the Zeros he set course for Salamaua. On landing the Hudson crew found themselves in the centre of a scene of destruction. The airfield was littered with wrecked aircraft and spattered with bomb craters. The Japanese investment of Rabaul had been accompanied by a series of "smothering" air attacks and Salamaua had paid heavily.

The first warning of these raids had come on 21st January when watchers at Madang reported more than 70 enemy aircraft—bombers with fighter escort—flying south-eastward. This formation divided into three groups which attacked Lae, Bulolo and Salamaua, respectively, the forces attacking Salamaua being estimated at 50 aircraft. The bombing of Salamaua (from about 8,000 feet) was followed by low-level fighter sweeps. Several commercial aircraft and a Hudson of No. 24 Squadron which was undergoing repairs were destroyed on the airfield, as were most of the buildings. At Lae, then the provisional capital of New Guinea, the attack was made by about 26 aircraft which spent about 40 minutes over the area. Civil airline workshops and stores, the town's power plant, and 6 aircraft on the ground were destroyed. Houses and public buildings, including the Government offices, were attacked by fighters but there were no casualties and the airfield runway was not damaged.

Other enemy air units attacked Madang and Wau at this time. At Madang a copra store was burned down and other buildings damaged. Five unescorted bombers scored hits on the commercial airline buildings at Wau, and one bomb hit the town's cinema. Since they had no opposition the bombers then flew low and fired their guns into rows of houses occupied by the native employees of a gold sluicing company, presumably mistaking them for military barracks.

The small garrison at Kavieng had been attacked by 40 bombers and 20 fighters on 21st January, two days before the invasion of Rabaul. There was, of course, no air opposition but the Australian army machine-

[4] Sgt R. C. Henry, 416181. 6 Sqn. Public servant; of Goodwood, SA; b. Adelaide, 14 Jan 1921. Killed in action 11 Feb 1942.

gunners gave an excellent account of themselves and claimed four enemy aircraft shot down. Bombs destroyed the copra sheds and other buildings and the army supply vessel, *Induna Star,* was damaged in the harbour. On the 23rd the enemy, landing at Kavieng and at Panapai close by, proceeded to demolish all buildings not already destroyed by the small garrison force before it withdrew.

In this period the Central War Room in Melbourne was being flooded by signals from the whole island area under its control—signals reporting enemy air attacks and the withdrawal of the token forces at outlying bases.

Kitava, in the Trobriand Islands, received a minor air attack on 23rd January. On the 25th Manus Island base reported a similar raid; from Lorengau there came the confident, if depressing signal—"Lorengau all demolished. All safe. In smoke." Next day Wewak was raided and on the 30th the Madang garrison signalled to Port Moresby: "Have destroyed runway Madang and prepared stores for firing."

The fall of Rabaul, like all military reverses, provided an important guide to the enemy's tactics and, of course, to the weaknesses in the defence. In this operation the role of the Japanese air units had developed from reconnaissance and photographic surveys to pattern bombing by squadron or multiple-squadron formations, then to high-altitude bombing with fighter escort, and finally to low-level attacks by fighters and dive bombers which were coordinated with the final invasion operations by the navy and army.

In the wider Pacific scene the full meaning of this latest achievement of the Japanese was not at once recognised. United States marines were fulfilling the American promise that Samoa should have first consideration in the reinforcement of Pacific bases—a strong force reached the island between 19th January and the day that Rabaul fell. One factor that Admiral Nimitz realised quickly was that the Japanese possession of Rabaul brought the Coral Sea within range of Japanese land-based bombers. He took the immediate precaution of ordering that all ships of his fleet entering what had been designated the Anzac Area must be escorted.

On 20th January Mr Curtin had sent a cablegram to Mr Churchill relating to the naval arrangements proposed for the Anzac Area. In this he noted that Admiral Nimitz was responsible not only for the security of the air ferry route and of convoys and supplies between the United States and Australia, but that his forces alone could provide the potential reinforcements for this area. He also emphasised that the situation then developing at Rabaul pointed to the need for much stronger forces in the Anzac Area.

There was some satisfaction when, on 26th January, the Australian Chief of the Naval Staff reported to the Advisory War Council that United States naval forces planned a sweep to the Gilbert Islands from Samoa and the Phoenix Group. To Australia this would be valuable chiefly in that it would provide diversion for the Japanese forces at Rabaul.

It had been suggested to Admiral Nimitz that this sweep might be extended to include Jaluit in the Marshall Group. The polite reply received from Nimitz was, "Appreciated. Will be glad to consider for future." Next day, following up Mr Curtin's message to Mr Churchill, a signal was sent to Nimitz pressing for a strong naval concentration in the Anzac Area and pointing out that the loss of Port Moresby would close Torres Strait, while the loss of New Caledonia would give Japan a base from which she could cut the sea and air ferry route between America and Australia and gain access to valuable chrome and nickel supplies. "Time factor suggests Japan, with so rich a prize in view, may act first," the signal stated. The force sought for the protection of this area was one strong enough to cope with an enemy force equivalent to that used for the capture of Rabaul—then estimated at one division of troops escorted by two 8-inch and two 6-inch gun cruisers and two aircraft carriers. At this stage the Advisory War Council had reports before it showing that there were 11 transports in Simpson Harbour, Rabaul, accompanied by cruisers, destroyers and aircraft carriers. It was assumed that the Japanese had landed and that the A.I.F. and militia garrison units were in action against the enemy. The prospect ahead could scarcely have been more grim for the Australian Chiefs of Staff and "outside" aid was the prerequisite for safety.

CHAPTER 19

AMBON AND AFTER

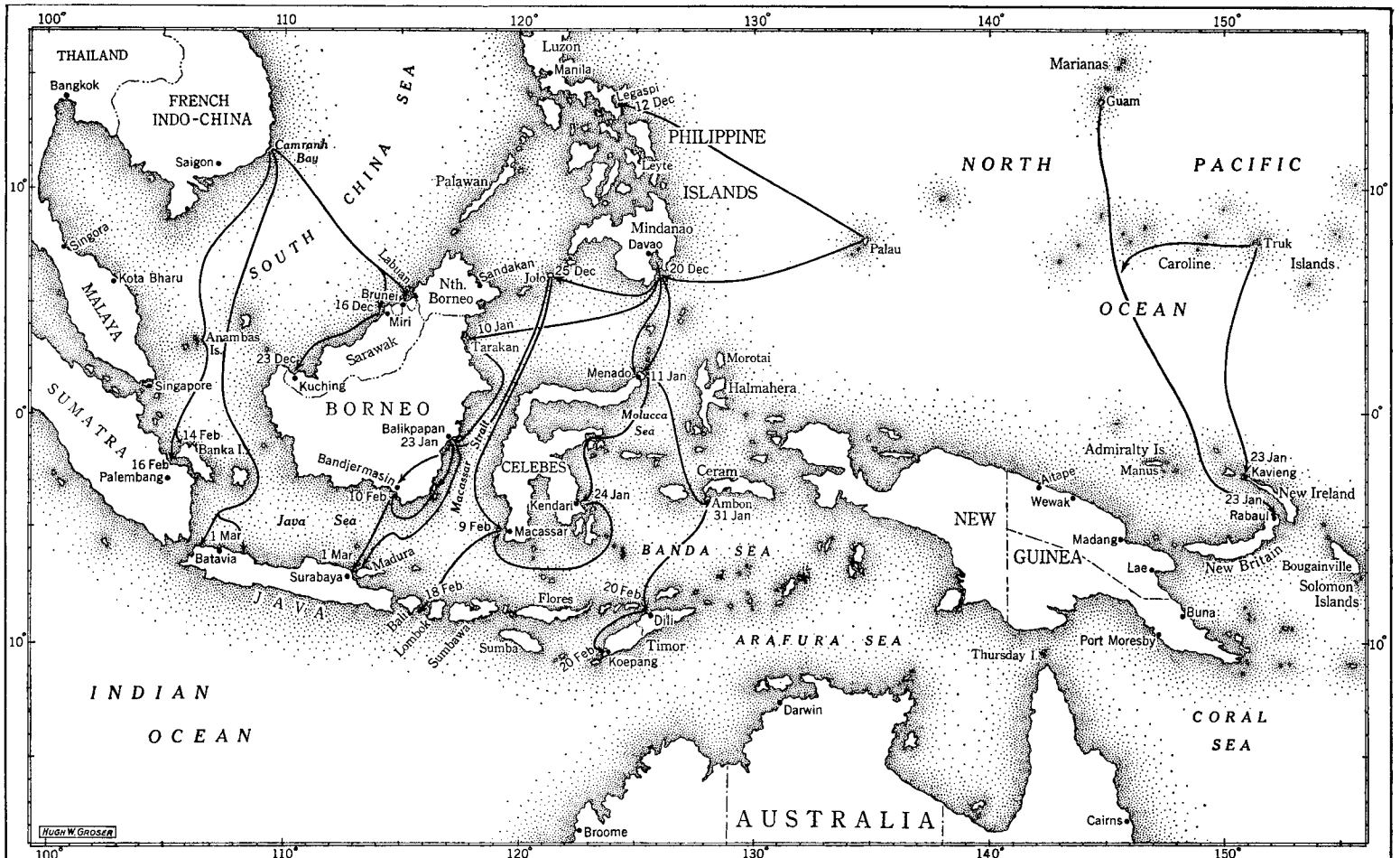
RABAUL had been occupied because, as a Japanese naval staff officer said later, not only was it a strategic point in the communications extending towards Australia, but it was within range for direct attack on Truk, the Japanese naval outpost. It also provided an excellent base for air reconnaissance to the north-east of Australia—an important zone of operations for Allied naval forces.[1]

The situation confronting General Wavell had perils that increased almost daily as the enemy took quick advantage of each southward step. But to those at his headquarters, both American and Dutch, who held that the forward Allied bases so gravely threatened—Sabang, Balikpapan, Kendari and Ambon—should be reinforced, he replied by emphasising the risk in dispersing such forces as he had. His plan was to hinder the Japanese advance as best he could, with his main resources being used in an effort to hold the Darwin, Timor, Sumatra, Singapore line. While Singapore held out this was demanded of him.

Now the Japanese forces holding north Celebes on the eastern side of the Celebes Sea and the island of Tarakan on its western side were ready for such further thrusts as their air striking forces, with an additional 400 miles reach, could support. A Dutch report that the Japanese had sent emissaries to the garrison at Balikpapan pointed the way rather obviously. The coveted Dutch oil port on the east coast of Borneo had been threatened with reprisals if the oil installations there were not surrendered to the Japanese intact. Columns of dense smoke rising from the oilfields gave the Dutch garrison's bravely contemptuous answer to the enemy force which advanced south along Macassar Strait on the 21st January. The movement of this force from Tarakan had been reported to ABDA Command and 6 United States and 2 Dutch submarines moved to intercept it as did Dutch aircraft from Samarinda 2 airfield. The aircraft bombed and sank the enemy transport *Nana Maru* (6,764 tons) on the 23rd and next morning a Dutch submarine sank a second.

Meanwhile an American task force commanded by Rear-Admiral Glassford, then in Koepang Bay, Timor, for refuelling, was ordered to intercept the enemy convoy. Glassford in the light cruiser *Boise* put to sea accompanied by the light cruiser *Marblehead* and 4 destroyers. Passing through Sape Strait at the eastern extremity of Java, *Boise* struck a reef, and Glassford transferred his flag to *Marblehead* and ordered the damaged cruiser to turn back. But *Marblehead* had engine trouble and could make a speed of only 15 knots, so the destroyers were sent ahead to attack, while Glassford took the cruiser north to a fixed rendezvous 90 miles south of Balikpapan to cover the destroyers' withdrawal. When darkness

[1] Rear-Admiral Tomioka Sadatoshi, Chief (1st Section) Naval General Staff.



The Japanese advance through the Netherlands East Indies and to Rabaul

came the four destroyers moved up Macassar Strait and, evading challenges from enemy patrol ships by maintaining silence, closed on Balikpapan Harbour and found the enemy transports silhouetted by the light from the burning oilfields. In a torpedo and gunnery attack lasting about one hour, the American destroyers sank or left sinking 3 of the transports and a small patrol boat before withdrawing safely to their rendezvous. The partial success achieved by this daring attack was far from being enough to check the enemy's landing. The Dutch garrison, having done all they could, withdrew leaving the enemy in possession of the town. That was on the evening of the 24th.

The commander of the Japanese force then sent a battalion to the extreme south of Borneo to capture Bandjermasin. This they did on 10th February without serious opposition, thus adding one more pressure point for their advance and one that was almost directly north of the important Javanese seaport, Surabaya.

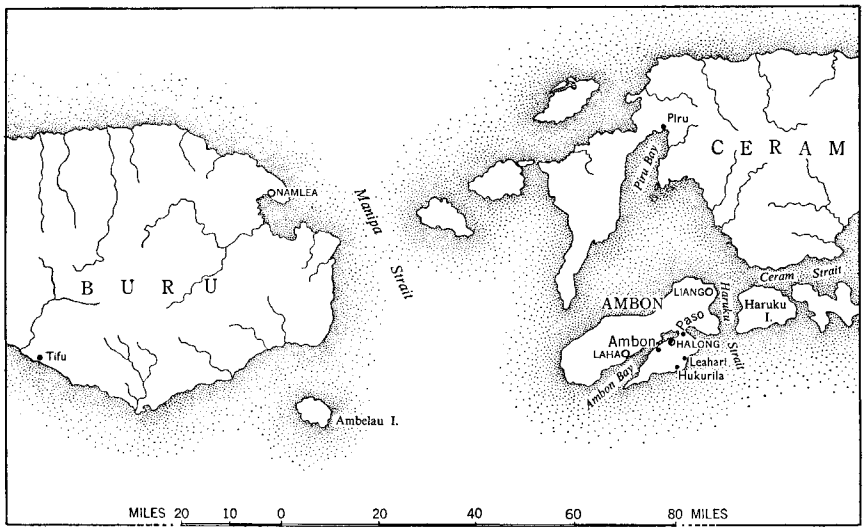
The invasion of Balikpapan had been accomplished by the Japanese force which had taken the island of Tarakan—the *56th Regimental Group*. A convoy of 16 transports had put to sea on 21st January, escorted by a light cruiser and 10 destroyers with 2 seaplane tenders (*Sanyo Maru* and *Sanuki Maru*)—the same protection that had been provided when the force had moved on Tarakan from Davao.[2] Added cover was to have been provided by aircraft of the *23rd Air Flotilla* also from Tarakan but these were grounded by bad weather. The night attack by the American destroyers had created confusion but had not seriously reduced the invasion forces which landed four days after the capture of Balikpapan. The *23rd Air Flotilla* had moved in on the aerodrome there and were ready once more to reach farther south.

In a simultaneous operation, Admiral Takahashi's eastern force had moved out from Menado and, on the day that the central force had taken Balikpapan, had added Kendari in the south-east Celebes to their growing series of stepping-stones to the main objectives in this area—Java and Timor. This force, the *Sasebo Combined S.N.L.F.*, had moved down from Menado in 6 transports, escorted by 8 destroyers and with the *21st Air Flotilla* as their "umbrella".

The Australian and Dutch garrisons on Ambon and Buru were now in the precise situation they had anticipated—under immediate threat without anything approaching adequate strength for either attack or defence. Some uneasiness about the morale of both the Dutch and Australian forces was indicated by two signals. One of these was a personal message from General ter Poorten to General Sturdee at Army Headquarters, Melbourne, stating that he had received a report from the Dutch commander at Ambon informing him that there was no question of any deterioration of morale among the Dutch troops. Wing Commander Scott about the same time sent a comparably reassuring message to the Central

[2] The *2nd Kure Special Naval Landing Force* was left at Tarakan as a garrison.

War Room, Melbourne. Both messages showed an awareness of some criticism of the forces they concerned. There was then no grave indication of failing spirits among members of the R.A.A.F. at these bases. There was, on the contrary, a clear indication of frustration caused by inability to attack the enemy effectively. It was certainly true that, as Group Captain Scherger remarked later, "morale was not high". "The men," he said, "felt that they had been 'pushed out on a limb' without anything like adequate means of carrying out offensive operations against the enemy, or of defending themselves. As the Japanese attacks developed and it



became increasingly plain that their worst fears were being realised, the morale did deteriorate further, and it was not improved by the high incidence of tropical disease."

The incidence of malaria, particularly, was causing much concern at Laha. Men were working through the day bare from the waist up and some were sleeping without mosquito nets. Of the sick evacuated about this time 99 per cent were suffering from malaria. Forty-two men were in hospital and the medical officer expected a "further fifty cases within the next week". Dysentery was also a serious medical problem. Living conditions were difficult and the food was poor in quality. There was added strain through lack of sleep because of the increasing number of false air-raid alerts at night, given by the operations room staff with warning shots and telephone calls in response to signals from the native watchers. Squadron Leader Ryland, commanding No. 13 Squadron, remarked that aircrew, already overworked, found great difficulty in getting enough proper rest. Another reason for strain was the added burden of work caused when the native labourers, adequate in strength under Dutch

control before war actually came to their islands, disappeared after the Japanese air attacks began.

A frank situation report by Air Commodore Wilson, air officer commanding the newly-formed North-Western Area, to Air Commodore Lukis, then commanding North-Eastern Area, was passed to the Chief of the Air Staff by telephone. This prompted Sir Charles Burnett to reply personally to Wilson saying that he appreciated the situation at Ambon and Buru as Wilson had outlined it and had already brought it to the notice of General Wavell. He reminded Wilson that units of the R.A.A.F. and A.I.F. were at Ambon and Buru to reinforce ABDA Command and that R.A.A.F. responsibility was restricted to administration and maintenance. A.C.H. Halong was responsible to Central War Room, Bandung, and not Central War Room, Melbourne. Burnett added that the Supreme Commander had informed him "within the last thirty-six hours" that he (Wavell) was aware of the position but was not prepared to give up an important key-point without fighting. Wavell intended visiting Ambon soon. Wilson would understand that it would be impossible for R.A.A.F. Headquarters to withdraw squadrons without Wavell's orders. The message added: "Have just been informed . . . that Ambon is being reinforced by (Dutch) Buffalo squadron from Singapore. . . ."

Scott and Ryland, having obtained permission, flew to Bandung to report the situation to Brett. Their case was that, if adequate strength in fighter aircraft and anti-aircraft artillery could not be provided, all but small parties to maintain refuelling and rearming facilities should be withdrawn from Laha and Namlea to Darwin. General Brett admitted that reinforcements could not be provided for the bases and authorised an order for the withdrawal as proposed. After their return to Halong the necessary withdrawal plans were made. A signal from ABDA Command, dated 24th January, instructed Scott to retain only sufficient aircraft to undertake the needed reconnaissance patrols. Darwin might be used for aircraft maintenance and as a rest base for crews. If strong enemy attacks should make Laha and Namlea untenable, reconnaissance might still be operated from Koepang or Darwin. Scott was given authority to order such operations at his discretion.

Concerned at the vulnerability of the advanced bases at Babo in west New Guinea and Bula, on the north-east coast of Ceram, the Dutch command, on 25th January, ordered the destruction of supplies of aviation fuel stored there. That day Babo, which had not been used to the extent expected, was evacuated by the R.A.A.F. detachment that had been stationed there, the last aircraft to leave carrying 11 members of the ground staff to Darwin.

While the question of reinforcement or withdrawal was being reviewed, the Hudson crews were heavily engaged in both reconnaissance flights and strikes on the enemy. Six Hudsons attempted to attack enemy transports off the Celebes coast about 20 miles south of Kema on the night of 18th January, but bad weather hindered the operation and prevented

any observation of its result. A Hudson from No. 13 Squadron, captained by Flight Lieutenant Willing,[3] did not return from a later reconnaissance flight over the Kema area.

After their successive attacks on the 15th and 16th the enemy had been satisfied with reconnaissance sorties over Ambon for the next five days. Though the R.A.A.F's strength was so low, the Japanese showed their respect by providing fighter cover for a Type-97 flying-boat that flew over the island on the 21st. That day 2 other flying-boats attacked anti-aircraft positions at Laha with machine-gun fire, and 4 enemy fighters followed in and strafed and put out of action the Essanne radio station. Further flying-boat sorties were made by the enemy on the 22nd, 23rd and 24th. The Hudsons tried interception, but their speed was not sufficient for the task, though gunfire was exchanged whenever the range permitted. Little result came from this duelling.

From the 23rd, when the Japanese resumed attacks by aircraft in formation, 17 bombers and 18 fighters bombed and strafed Ambon, Halong and Laha. Damage to aircraft and runways was slight, but about 3,000 gallons of fuel were destroyed.

Namlea, which until now had been free from attacks, had its first raid on the 24th. A flying-boat spent 20 minutes over the base, dropped four bombs and did little damage. This discovery of Namlea by the enemy was regarded as accidental—a Hudson, climbing after take-off from the base, came out of cloud and almost collided with the flying-boat which then descended below the cloud level, presumably to find out where the Hudsons had come from. For defence against such attacks Namlea's native troops had but three light anti-aircraft and a few machine-guns. There was more than a touch of irony in the fact that a fighter-control system was being installed at the base. It was never completed, which did not seem to matter much since there never was any prospect of the base having fighters to control.

The day after the discovery of Namlea by the enemy another flying-boat appeared over the airfield. All Hudsons took off. About 30 minutes later 16 twin-engined bombers in two equal formations passed overhead at high altitude. One returned at 15,000 feet, descended to 10,000 feet, bombed, and then came down and made a strafing attack. Little damage resulted. The second formation flew over Halong where 60,000 gallons of aviation fuel were destroyed and two Catalinas damaged in the attack.

To this date (25th January) Nos. 2 and 13 Squadrons had lost 13 aircraft—the return for which had been much valuable information from reconnaissance flights and damage inflicted on the enemy which, though hopelessly insufficient for the main purpose of holding their advance, was certainly considerable in relation to the size of the Hudson force and the conditions under which they operated. The enemy's consciousness of this was shown on the 26th when a strong force of Zeros came marauding

[3] F-Lt M. P. Willing, 218. 14 and 13 Sqns. Regular air force offr; of New Mile End, SA; b. Fullarton, SA, 8 Mar 1918. Killed in action 19 Jan 1942.

over Laha and Namlea. The warning was too short for the Hudson crews to get their aircraft into the air and the result was costly—three destroyed on the ground at Laha and one at Namlea. One of the Hudsons, though riddled with bullet holes, was painstakingly repaired by the ground crews so that it "lived to fight another day" with the soubriquet, affectionately bestowed on it by the squadron, of "Colander Kate" or "The Flying Colander". Later it was flown to Darwin by Flying Officer Law-Smith,[4] one of the pilots who had engaged in duelling with the enemy flying-boats.

On this day ABDA Command signalled to A.C.H. Darwin: "Can you make available Empire flying-boats to evacuate from Laha and or Namlea? If so request you dispatch boats as soon as possible to these bases." North-Western Area was instructed to send one flying-boat immediately and by the 29th an Empire flying-boat with Flight Lieutenant John MacL. Hampshire in command, had made two sorties to Laha. This aircraft and what Hudsons were available for the task were the only means of evacuating the R.A.A.F. from Ambon and Buru.

Several sightings of enemy warships off the north Celebes coast were reported by reconnaissance crews (one crew even reported having been fired on at long range by the forward guns of a cruiser) but about 3.30 p.m. on the 26th the crew of one Hudson sighted 22 ships—transports in convoy with a naval escort—in a position just north of the equator and to the east of Menado, moving on a south-easterly course. The crew's assessment of this force was 13 merchant vessels, one heavy cruiser, 3 light cruisers, and 5 destroyers. There could no longer be any question that Ambon was to be invaded.

While some Hudson crews shadowed the approaching force and reported its progress through the Molucca Sea, others prepared their aircraft, stripping them of all unessential equipment, and joined the Empire flying-boat in its evacuation task. Ground crew laboured to repair one Hudson that had been damaged in landing and needed a new tail plane. They worked all night with only a shaded torch for light and in the most difficult conditions but by dawn the aircraft was ready for take-off. From each Hudson 68 gallons of fuel were drawn from the tanks leaving but a small safety margin. Tin hats, boots, capes, revolvers and all other clothing and equipment not absolutely necessary were discarded. All guns, ammunition, Very pistols and pyrotechnics were taken from the aircraft and destroyed. Flight Sergeant McEgan,[5] one of 23 men crowded into a Hudson piloted by Flight Lieutenant Cornfoot,[6] described the take-off and flight to Darwin later:

> It took the whole length of the runway to get off. There was no flare path and only a pale moon to guide the pilot. All passengers stood for the whole journey, parked between the pilot and the second main spar of the aircraft—only one man

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[4] Sqn Ldr R. R. Law-Smith, AFC, 280733. 2, 100, 36 and 34 Sqns; comd 37 Sqn 1944-45, Deputy Director of Postings 1945-46. Solicitor; of North Adelaide; b. Adelaide, 9 Jul 1914.

[5] W-O A. H. McEgan, 2404. SHQ Darwin and AOB Ambon. B. Kent Town, SA, 24 Jun 1914.

[6] Sqn Ldr R. G. Cornfoot, AFC, 250630. 13, 14 Sqns, 1 OTU (RAAF Special Transport Flight) and 36 Sqn; comd 38 Sqn 1944-46. Clerk; of Toorak, Vic; b. Kew, Vic, 22 Nov 1918.

was aft of that, the air gunner, Sergeant Ducat.[7] The journey took four and a half hours and we were glad to be relieved from our cramped positions; we were so crushed that we couldn't lift our arms.[8]

Meanwhile demolitions were being carried out by the men of Gull Force, now commanded by Lieut-Colonel Scott[9] (the outspoken Lieut-Colonel Roach had been replaced). On the evening of the 30th two Hudsons remained, detained by Wing Commander Scott so that he would have "last minute" reconnaissance reports of the enemy invasion force, but the time had come for the last act of evacuation, and the Hudsons were being refuelled for the flight to Darwin. The pilots, Flying Officers Haythorn[1] and White[2] were discussing the loading when a stream of petrol was seen coming from the main fuel line of White's aircraft; the line had been shattered by an enemy bullet and the fuel was running from the tank side of the main fuel cock, which meant that all tanks would be drained. Twenty-eight officers and other ranks were waiting on the airfield to fly to Darwin. Scott revised his plans and ordered 17 of them on board the serviceable Hudson. That left eight besides the pilot, co-pilot—Flying Officer Meyer[3]—and himself. Haythorn took his aircraft off about midnight and Scott's party went to work on the damaged aircraft. The task was beyond them with the equipment they had. Scott, who earlier had been in telephone communication with Halong while Hampshire's flying-boat was embarking the last of the staff there, had told him to take off and said that he and the remainder of the Laha party would fly out in White's Hudson. Now he sent a radio message to Hampshire asking him whether he could return and take his party out. But the flying-boat was half-way to Darwin, and lacked the fuel to cover the additional distance. Hampshire knew also that to attempt a night landing in the mine-sown waters off Laha would be to take a very grave risk of losing his flying-boat and everyone in it. He had no course but to fly on. Earlier it had been arranged that if a R.A.A.F. party should be left behind they would endeavour to go by native boat across Piru Bay from the north side of Ambon, to Geser Island off the south-east tip of Ceram.

Wing Commander Scott's last signal, sent on the 31st, read: "All cyphers burned. Demolition completed. Known Japanese landing at Leahari and Hukurila [about 3 miles apart on the east coast of the island and 5 to 6 miles from the town]. Japanese have reached Laha from over-

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[7] F-Lt A. W. Ducat, DFM, 406327. 13 Sqn; Gunnery leader, RAAF Flight attchd 45 Sqn USAAF 1944, RAAF Adv HQ 1945. Salesman; of Shenton Park, WA; b. St Kilda, Vic, 22 Apr 1913.

[8] Pilots taking part in the evacuation included Sqn Ldr J. P. Ryland, F-Lts J. Haythorn, H. E. Birley and R. G. Cornfoot from Ambon and F-Lts R. R. Law-Smith and J. W. Finlayson from Namlea.

[9] Col W. J. R. Scott, DSO, VX71997. (1st AIF: Maj 20 Bn.) GSO1 G Branch (Special Operations) AHQ 1941-42; comd 2/21 Bn 1942. Insurance inspector; of Killara, NSW; b. Bingara, NSW, 21 Jun 1888. Died 19 Nov 1956.

[1] F-Lt J. Haythorn, 260722. 13 and 6 Sqns. Draftsman; of Willoughby, NSW; b. Young, NSW, 23 Jan 1920. Died of injuries 4 Apr 1943.

[2] F-Lt W. V. D. White, DFC, 260624; 2 Sqn. Farmer; of Kenya, British East Africa, and Edgecliff, NSW; b. Inverell, NSW, 25 Oct 1913. Executed by Japanese 20 Feb 1942.

[3] F-O F. N. Meyer, 290745. 21 and 13 Sqns. Assistant works manager; of Maylands, WA; b. Guilford, WA, 2 Oct 1921. Presumed dead 20 Feb 1942.

land and engagement proceeding. Will call whenever possible." A signal received in Darwin at 1 a.m. on the 31st announced that Laha radio station was about to be demolished. Just before the evacuation Scott had been using a portable transceiver to communicate with Darwin and Namlea. This equipment, concealed in a camouflaged tent, was manned by a radio operator, L.A.C. Walker,[4] for 24 hours after the last Hudson had taken off and until its batteries were exhausted. By that time the landing places of the invasion forces, their approximate strength, and details of the R.A.A.F. staff left behind had all been transmitted to Darwin.

Inevitably the strain on the entire signals system increased in proportion to the increase in enemy activity. From the time the invasion convoy was sighted the burden became so great that aircraft—notably Hampshire's flying-boat—were used whenever possible to carry signals by safe hand to Darwin. Despite this the maintenance of communications between the A.O.C. at Darwin and the two Central War Rooms was a considerable achievement as a result largely of the good initial planning and installation work under the direction of the Director of Signals, Group Captain Wiggins.[5]

Hampshire kept the emergency rendezvous off Geser Island in his flying-boat on 12th February and again on the 15th, but without success. Scott and his party of ten were eventually posted missing. Later it was learned that the party had made their way across the hills to the north of Ambon Island with the intention of crossing by boat to Ceram, but in doing so were intercepted in Piru Bay by a Japanese patrol boat and taken prisoner.[6]

At Namlea Squadron Leader McFarlane,[7] commanding the base, had the R.A.A.F. troops well drilled in what to do in the event of enemy action, and slit trenches had been dug throughout the camp area. In the raids there had been only one R.A.A.F. casualty—a man wounded. All ranks had emergency clothing and rations ready, packed in haversacks. The runways had been mined ready for demolition and in the last week the precaution of dispersing all but those on duty to a beach, about two miles from the airfield, had been taken. Here the sick were taken, their beds being camouflaged with mosquito nets.

Apart from visits by a single enemy flying-boat on the 27th, and again on the 30th when the airmen's quarters were damaged by bomb explosions, but without casualties, Namlea was not raided again. On the 30th Mc-

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[4] LAC L. D. Walker, 27521. RAAF SHQ Darwin and AOB Halong. Electrical mechanic; of Croydon, SA; b. Kooringa, SA, 26 Mar 1918. Executed by Japanese 20 Feb 1942.

[5] Gp Capt C. S. Wiggins, CBE, 1336. Director of Signals RAAF HQ 1940-42, of Communications AAF HQ 1942-43, RAAF Comd 1943-44; Director of Telecommunications and Radar, RAAF HQ 1944-45. Regular air force offr, soldier and farmer; of Melbourne; b. Mudgee, NSW, 6 Oct 1898.
As early as June 1941 Wiggins had attended a combined forces signals conference at Batavia and later inspected the bases on Timor, Ambon and Buru.

[6] W Cdr Scott and most of his party were executed on the 20th February.

[7] Gp Capt A. B. McFarlane, DFC, 250207. 6 Sqn; comd RAAF AOBs Ambon and Namlea 1941-42; comd RAAF Rear Party Namlea, SO Training North-Western Area and comd 2 Sqn 1942; OTLO Overseas HQ 1943-44; SO Directorate of Training and Personal Services 1944-47. Secretary, Dept of Air from 1956. Student; of Yarraville, Vic; b. Yarraville, 4 Jun 1916.

Farlane received a signal from Scott advising him that three aircraft were being sent to remove the R.A.A.F. base staff except for a demolition and maintenance party. The signal ended with the words "Allah be with you!" That night three Hudsons piloted by Flying Officers Finlayson,[8] Law-Smith and Lamb,[9] arrived. Finlayson's aircraft was damaged on landing when it hit the wreckage of a Hudson that had been smashed by a bomb hit. Every available man worked with the aircraft riggers to repair the damaged aircraft and to strip all three for their evacuation task.

McFarlane gathered the station staff together and called for volunteers to stay behind with him to carry out demolition work. Every man responded, so a selection was made by eliminating first the married men with families, then men with dependents; finally 7 men remained besides the base commander and Flight Lieutenant Handbury,[1] who kept the base open for last-minute reconnaissance operations and then carried out demolitions. The remainder then took off—15 in Finlayson's damaged aircraft, 22 in Lamb's, and 23 in Law-Smith's. All reached Darwin safely.

The last signal sent by McFarlane was a code sign meaning "No further traffic. Am about to immobilise station owing to proximity of enemy." With his small party he then went to work on the final stage of the demolition plan. Having destroyed everything of value to the enemy they then "went bush" and began the arduous trek of 60 miles across wild hilly country to Tifu on the south coast. Here, in defiance of superstition, they were picked up by Hampshire's flying-boat Q.A. 18-13 on the 13th February, and flown in safety to Darwin.

As indicated in Scott's last message, the enemy's assault on Ambon bifurcated. One force attacked the Dutch garrison in the region of Paso at the head of Ambon Bay and, applying their pressure from both the north and the south, overwhelmed the defenders' comparatively small force, which surrendered on the night of the 31st.

At Laha and on the peninsula to the south the men of Gull Force fought until their ammunition supply dwindled and they too were overwhelmed. On 3rd February the little force capitulated.

While the invasion of Ambon and Buru was proceeding the enemy was actively organising the next move of the force that had captured Kendari. Wavell received air reconnaissance reports on the 7th February revealing the movement of still another convoy which was sighted rounding the south-east coast of Celebes in a westerly direction. Admiral Doorman's force, then at Tjilatjap on the south coast of Java, was ordered out to engage the enemy, but before his ships could be made ready for

[8] Sqn Ldr J. W. Finlayson, 260523. 14 Sqn, HQ North-Western Area, 74 Wing, 21 and 23 Sqns. Cost clerk; b. 4 Nov 1916.

[9] W Cdr N. F. Lamb, 290732. 14 and 2 Sqns; Controller 8 Fighter Sector 1942-43; comd Armament Instructional Sqn, Nhill, 1944-45. Student; of Perth and Wiluna, WA; b. Subiaco, WA, 14 Feb 1916.

[1] W Cdr J. E. Handbury, AFC, 395. 6 Sqn and 1 OTU; RAAF HQ Darwin and Controller ACH Namlea 1942; Trans Pacific Air Ferry Service 1943-44; comd Heavy Bomber Replacement Training Unit 1944-45, RAAF Detachment Aust Joint Staff Mission Washington 1945. Regular air force offr; of Melbourne; b. Melbourne, 25 Mar 1920.

sea further reconnaissance showed that any sortie by Doorman would be too late. The enemy ships had reached their objective, Macassar, and by the night of 8th-9th February were already putting their troops ashore. The Dutch garrison of only two companies was of little avail and had been overcome by the night of the 9th, leaving the final big centre in Celebes in possession of the enemy.

For the invasion of Ambon the enemy had taken no chances. The troops consisted of the *1st Kure Special Naval Landing Force* and *228th Regiment*, a unit that only a month earlier had taken Legaspi in southern Luzon from MacArthur's forces. In 16 transports they left Davao on 27th January, staging through Menado on the 29th. The concentration of air strength used for this phase of the enemy's campaign was impressive and, indeed, highly flattering to the limited Allied air forces opposed to them. Whereas the first air attacks on Ambon were made by Mavis flying-boats from the *21st Air Flotilla* based on Davao and Palau, and then by medium bombers of the *Kanoya Group* after the *21st Flotilla* had moved to Menado, the real "softening up" raids had been made from mid-January on by aircraft from the *2nd Carrier Division.* This division, comprising the carriers *Hiryu* and *Soryu,* had been one of the three that had jointly attacked Pearl Harbour. It had then taken part in the attack on Wake Island. After a return to its base in Japan the division was at Palau by 17th January moving down to position just north of Ceram. From here the carriers' aircraft were used to support the landing at Kendari. They left 18 bombers and 18 fighters based at Kendari before withdrawing on the 26th, the day after the arrival at the new base of the *21st Air Flotilla.* Both the carrier and land-based aircraft then joined in attacks on Ambon and Namlea.

Meanwhile the 16 transports had moved south under an escort of the light cruiser *Jintsu* and 10 destroyers and the seaplane tender *Chitose.* Cover for this force was given by the heavy cruisers *Nachi* and *Haguro* with two destroyers, and at sea this force was supplemented by the light carrier *Zuiho,* the seaplane tender *Mizuho,* minesweepers and anti-submarine craft. The troops of the *228th Regiment* went ashore in the south of Ambon Island and the naval landing force in the north. By 5th February *21st Air Flotilla* was moving in fighters, bombers and flying-boats.

For the capture of Macassar, the Japanese deployed 6 transports to carry the *Sasebo Combined S.N.L.F.* which since taking Kendari had been based there. Putting to sea on 6th February, these ships had an escort of one cruiser (*Nagara*) and 6 destroyers, covered by 2 heavy cruisers, 2 destroyers and the seaplane tenders *Chitose, Mizuho* and *Sanuki Maru.*

In the vast task of airfield and base development the Americans had the men, the equipment and, to use their own phrase, the "know how".

The American Chief of Staff, General Marshall, in a cable dispatched on Christmas Day 1941, had told General Brett: "The purpose is to make your command predominantly air, with the other elements limited to those needed for efficient air operations and security of bases." Brett had asked, in January, for one engineer service unit, one engineer general service regiment, three engineer aerodrome units and two engineer labour battalions.

"I am firmly convinced," Brett informed Marshall, "that it is essential to have a stable establishment in Australia prior to large-scale tactical operation." After consultations on 3rd-4th January between General Brett and the Australian Service heads, a Chief of Staffs Committee, a Joint Planning Committee (Deputy Chiefs of Staff) and a General Administrative Planning Committee were formed. Each committee comprised one representative each from the U.S.A.F.I.A., the R.A.N., Australian Army and the R.A.A.F., while a representative of the Australian Government (Mr Abbott[2]) presided over the Administrative Committee.

Decisions on the establishment of main bases were:

Brisbane—An air base "with a small runway" at Eagle Farm with a main workshop base near the city. Brett expected the base to prepare to service 3,000 to 4,000 aircraft.

Townsville—A fighter aircraft depot; a secondary workshop and maintenance installation; adequate defences—R.D.F., anti-aircraft and fighter units, for which an additional operational airfield would be needed in the vicinity, possibly at Charters Towers, to accommodate the bomber units and so relieve Townsville and to provide a "dispersion park" for fighter aircraft.

Darwin—An air base here was an "absolute necessity". Bathurst Island might provide a site for a fighter base.

Melbourne—A reception and replacement centre with accommodation for 8,000 to 12,000 men.

So that the whole organisation would be decentralised, four base section headquarters were established—at Darwin, Townsville, Brisbane and Melbourne.[3]

To coordinate and supervise all civilian effort "devoted to the construction of military defence projects", the Allied Works Council was formed in February 1942. In addition to its civil members, the Chief Engineer of U.S.A.F.I.A. (later superseded by the Chief Engineer G.H.Q., S.W.P.A.), the Director of Works, R.A.A.F., (Group Captain Knox) and the Chief Engineer of the Australian Army,[4] were represented. The

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[2] Hon J. P. Abbott, OBE, MC. (1st AIF: 14 Bn.) MHR 1940-49; Minister for Home Security 1941; Chairman Admin Planning Committee 1942. Grazier; of Wingen, NSW; b. Winchelsea, Vic, 4 Jul 1888.

[3] In early March 1942 base headquarters were also established at Adelaide and Perth and in April at Sydney. These base sections were numbered thus: No. 1—Northern Territory (plus a triangle taking in portion of Queensland, the Barkly Tableland, an area round Mount Isa and the north-west "corner" of Western Australia); No. 2—the remainder of the northern half of Queensland; No. 3—southern Queensland; No. 4—Victoria; No. 5—South Australia; No. 6—Western Australia (excepting the north-west "corner"); No. 7—New South Wales.

[4] In November 1942 the Works and Services Branch of the Department of the Interior was merged with the Council.

Council's task was to control all equipment, supplies, transport and manpower available to the Commonwealth.[5]

Uppermost in the minds of all Allied Air Headquarters at this time was the problem of reconciling the many claims for air strength, all of them urgent. The needs of ABDA Command were as acute as they could be and, with the Japanese in possession of Rabaul, the Australian claims for aircraft were increasingly urgent. The deployment of American fighter squadrons at Koepang, Ambon, Kendari, Samarinda, Surabaya and Batavia had been planned, but these were days when plans were made one day and cancelled the next. The very pressure which demanded speed in the delivery of aircraft and supplies often caused delay through confusion due, in turn, to haste. Units and their equipment were frequently separated, sometimes for considerable periods, because the means of transporting each had necessarily varied.

Inadequacy or the entire absence of tools and spare parts and inexperience in assembly added to the delays. Yet the endeavour always was to make the best use of the men and material available, as when the ground crew of an American bomber unit assembled 138 Kittyhawk fighters in 58 days, completing the task by 4th February. Partly trained American aircrew were rushed through an improvised training program. Fighter pilot training was conducted at Amberley and dive bombing at Archerfield.[6] "Veterans" from the Philippines, in charge of the schools, found that a major problem was the limited experience of the fighter pilots who had just arrived from the United States. Their average total flying time in pursuit aircraft amounted to only about 15 hours. The accident rate was high.

Provisional fighter squadrons were formed to absorb the pilots and aircraft as they disembarked at Brisbane.[7] The first of these squadrons (No. 17) set out from Brisbane on 16th January for Darwin en route for Java. The commander, Major Sprague, and 12 of the pilots had fought in the Philippines; the other four were second-lieutenants who had just arrived from the United States. With two Australian aircraft as guides, they made the 2,000 miles flight. All but one, which crashed on landing, reached Darwin safely by the 18th. By 25th January 13 of these aircraft had reached Surabaya after crossing the Timor Sea to Koepang—a stage on which they were escorted by an Australian flying a two-engined Beechcraft—and then flying to Sumba Island and thence to Java. Some of the pilots completed the final stages flying alone.

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[5] In April 1942, under the authority of the National Security Act, the Council formed the Civil Construction Corps, which by regulation brought into its service all men between 18 and 60 who passed a medical test and who were not already engaged in work of national and wartime importance.

[6] Initially 15 hours' training was specified for both fighter and dive bomber pilots with 6 hours actual dive-bombing practice.

[7] Nos. 17, 20, 3, 33 and 13 Pursuit Squadrons were formed and manned by "casual" pilots. Respectively the commanders of these units were Maj Chas. A. Sprague, Capt Wm. Lane, Jnr., Capt Grant Mahoney, Maj Floyd Pell and Lt Boyd Wagner.

CHAPTER 20

ON SUMATRA

FAR East Command had withdrawn to Sumatra to gain "elbow room" for the reinforcement and re-forming of its depleted squadrons. However, the rapidity with which the airfields on Singapore Island had come under Japanese air and artillery attack had left little doubt in the commanders' minds that their basic weakness remained: while there was now ample physical space, there was not nearly enough time for recovery. The Japanese, with their great numerical superiority in men, weapons, material and mobility, were proving masters of the military art of maintaining pressure. The British and Dutch forces, on the other hand, were still facing the same grim disabilities that had beset them from the outset; the truth was that Sumatran bases were as weak and as unprepared as the Malayan bases had been.

Another factor that whetted the Japanese appetite for quick victory in Sumatra and added to the burden of the defenders was oil. Close to Palembang, capital of this great island which stretched for 1,000 miles across the south-westerly front of the Malayan Peninsula, were oilfields, regarded as the foremost in South-East Asia, which supplied two refineries adjacent to the town.[1] The Musi (or Palembang) River forked just below the town to flow delta-wise for about 50 miles until it ran out into Banka Strait. Its main channel was navigable by ocean-going ships.

By contrast with the congestion experienced on Singapore Island, the new territory was a vast area of jungle and swamp land which flanked a mountain range running the entire length of the island on the western side. There were few roads, the railways (single line) did not connect, and the radio-telephone system that linked the principal towns and connected Sumatra with Java was open and very insecure—Malayan problems over again.

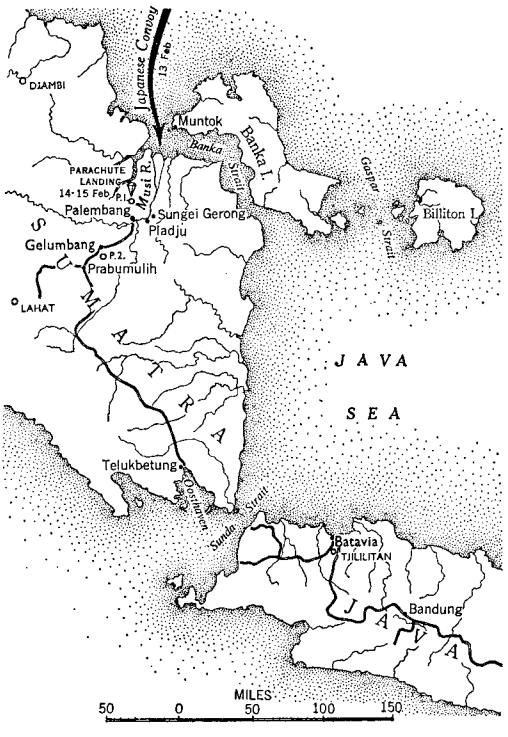
While the Malayan campaign was in progress priority in aerodrome construction in Sumatra had been given to sites in the north suitable for the refuelling of reinforcement aircraft flying to Singapore by the trans-India route—sites that had become vulnerable from the day the Japanese gained aerodromes on the Malay Peninsula. By mid-January small refuelling and rearming parties, varying in strength but at most 50 men, had been placed at Sabang Island off the northern tip of Sumatra, at Lhonga on the main island across the Malacca Passage from Sabang, at Medan civil aerodrome where the Dutch were constructing a military aerodrome, at Pakanbaru in the centre of the island, at Padang midway down the south-western coastline, at P.1 and P.2. An airstrip had also been made at Lahat about 70 miles to the south-west of P.2 and the

[1] In 1940 Japan derived 65.1 per cent of her oil supplies from the N.E.I., and the Sumatran contribution (which included high octane petrol) in that total was 40 per cent. In the same year the N.E.I. contributed 41 per cent of the world's total production in rubber and 9 per cent of the tin.

Dutch were building an aerodrome near Oosthaven on Sunda Strait in the extreme south.

Group Captain Bishop, who had arrived at Palembang on 18th January, had orders "to accelerate to the maximum arrangements for the operation of bomber units from Sumatra". These arrangements were intended to provide for all bomber aircraft then based on Singapore, for two Blenheim IV squadrons (Nos. 84 and 211) then on their way from the Middle East, for Hudson III aircraft arriving from Britain to re-equip No. 62 Bomber Squadron R.A.F. and the two Australian reconnaissance squadrons (Nos. 1 and 8).

Even as late as the middle of January the command had been confident that the situation in Malaya would be stabilised, that a bridgehead of sufficient area for the deployment of reinforcements would be held, and a counter-offensive undertaken. Air Vice-Marshal Maltby, in his despatch, refers to the transfer of fighter squadrons from Singapore Island as "not on the cards" at this time.



The invasion of southern Sumatra

P.1 aerodrome was L-shaped with two hard-surface runways. Aircraft dispersal areas were being developed by Dutch engineers, but there were no living quarters and all ranks had to travel to and from Palembang town, eight miles away. P.2, a huge natural field with a perimeter measuring about 10 miles, was concealed from the road and, as events proved, concealed too from the Japanese. Previously it had been used only as an emergency landing ground. It had excellent natural cover for aircraft and similar clearings in the neighbourhood made it extremely difficult to detect from the air—even aircrews briefed on its location had trouble in finding it. Palembang town and P.1 were both on the north side of the Musi River. P.2 was on the south side and there was no bridge. A ferry with capacity for from four to six vehicles provided the only means for crossing

—a serious "bottleneck" which the Dutch sought to minimise by undertaking the construction of living huts on P.2.

Though a single-line telephone linked the two airfields with group headquarters, neither wire nor instruments were available for the installation of internal aerodrome telephone systems. A point-to-point wireless-telegraph system was improvised so that Air Headquarters was linked with Sabang and Lhonga on the air reinforcement route, and a Dutch civil observer warning system established at Palembang provided two concentric circles of posts, one at a radius of 30 and the other at a radius of 60 miles. Several additional and more distant posts were established, one at the north of Banka Island, one at the mouth of the Musi River and one at Tanjong Pinang on Bintan Island, to the south-east of Singapore, but, as the outer posts were necessarily more widely spaced, most of the warnings of the approach of enemy aircraft came from the 30-mile circle. Communication from the posts was by wireless or telephone. Without radar and without experience in aircraft recognition to supplement their undoubted enthusiasm the warnings from these volunteer observers were erratic.

At first the Sumatran airfields were entirely without anti-aircraft guns. The Dutch, unable to obtain guns either from America or Europe, had already lost aircraft on the ground at Medan and Pakanbaru as a result of Japanese fighter attacks. By the end of January ABDA Command had provided six heavy and six Bofors anti-aircraft guns each for P.1 and P.2 and four of each type for each oil refinery. But ships carrying ammunition for the guns were sunk by enemy action and little was available at any stage of the campaign.

Each of the Palembang airfields had been allotted a defence force of 150 Indonesian troops with two rather ancient armoured cars. These troops were reinforced by R.A.F. aerodrome defence parties. For general defence a single Indonesian regiment was responsible for the whole area and the river approach to the town from the sea—a most vulnerable sector —was entirely undefended. Pleas to the Dutch naval and military commands and to ABDA Command had been in vain; no troops could be spared.

Though ABDA Command could not promise any strong naval support on the vulnerable South China Sea front to the Palembang area, Intelligence reports warning of a probable seaborne movement by the enemy against Sumatra were not ignored. H.M.A.S. *Hobart* and two destroyers were detached from convoy duty and ordered out from Batavia to join H.M.S. *Exeter* in a sweep to the north of Banka Island. The warships were met by waves of enemy bombers which fortunately failed to harm any of them seriously. They returned to Batavia without sighting any enemy shipping.

Into this defensively weak and uncertain setting Far East Command's air units had been forced by enemy pressure on the "eve" of the fall

of Singapore; all of them were based on P.1 and P.2 aerodromes.[2] Movement of the aircraft themselves was comparatively simple; what was most difficult and very hazardous was the attempt to transfer sufficient stores, equipment, bombs and ammunition to make the striking force effective. The Japanese held the power of denial. Maltby's despatch on the campaign contains these sentences:

> . . . plans largely frustrated by the speed of the Japanese advance . . . dislocation caused at the docks in Singapore by air attack . . . plans further frustrated by Japanese action against shipping at sea . . . many ships sunk and others re-routed at sea to other ports . . . cumulative effect was disastrous . . . practically all equipment destined for Sumatra went astray . . . no MT except some light motor cars and a few bomb trailers . . . only three refuellers available . . . no tentage and field equipment. . . .

Using what did arrive and what they obtained locally through their cooperative Dutch military and civil partners, No. 225 Group Headquarters worked their hardest. Shortage of aircraft spares was serious, particularly for the Blenheim Mark IVs, and this was the type of aircraft with which the two reinforcement squadrons (Nos. 84 and 211) were equipped. Petrol, oil and lubricants had been provided at each of the Palembang aerodromes on the basis of anticipated needs for three months. Bombs were delivered from Singapore in limited quantities. An organisation for the local purchase of supplies was formed and contracts for the provision of domestic equipment, of which the force had little, were hastened and expanded. While, by the first week in February, aircrews and ground staff were reasonably fed and accommodated, the main withdrawal of air force units from Singapore, which reached its peak soon after that date, completely upset the balance. Where provision had been made for 250 officers and men at P.2, 1,500 were now "accommodated", and 2,500 more were housed in schools and cinemas in Palembang town. Food was scarce but R.A.A.F. men arriving from Singapore fared rather better than most because they had been issued with six weeks' rations before they left.

The members of No. 21 Squadron, who had reached Palembang by sea on 1st February, were quartered in reasonably comfortable native buildings in the town. Next day group headquarters produced a plan for the disintegration of the unit and the use of its members as a labour pool when and where required and they were given miscellaneous duties at P.1 aerodrome and on the wharves. There was resentment in the squadron at this threat to their identity and Group Captain McCauley became the intercessor. His plea succeeded and arrangements were made to move the squadron to Batavia as the first stage of its return voyage to Australia. On 7th February they entrained for Oosthaven. The next move was to Batavia where they performed miscellaneous aerodrome duties as at Palembang until, after continued submissions to Air Headquarters,

[2] One bomber squadron was moved to Lahat on 10th February with Group Captain Noble as station commander but the tide of the campaign was running too fast: there was not time to make it operational.

they embarked on the 1,000-ton steamer *Giang Ann* and, on 17th February, sailed for Australia, reaching Fremantle 15 days later.

At P.2, where McCauley had taken up duties as station commander on 29th January, conditions generally were very difficult. Distances between the living quarters, the operations room and the aircraft dispersal area were considerable and orders from group headquarters were issued often without allowing for the added time required for the crews to walk between these points. The transport situation was so bad that McCauley sent one of his officers scouring the country in search of vehicles. He returned with a variety of transport including two large refuelling units contributed by the Shell Company, but much of the refuelling still had to be done from small cans, and bombs had to be manhandled into the aircraft bomb bays. The burden of work was increased by the need to supplement the 150 troops who formed the aerodrome defence force; the R.A.A.F. squadrons alone had to withdraw more than 67 technical staff from aircraft maintenance for this purpose.

In the beginning of February No. 225 Group, which had established its headquarters in what formerly had been a hotel in Palembang town, controlled seven nominal squadrons. Of the two Australian Hudson units No. 1, which had 16 airworthy planes, resumed operations on 31st January with an attack by five aircraft on Alor Star in northern Malaya. Refuelling at Medan, they flew through violent storms, had the satisfaction of seeing their bombs find the target, and returned safely next day. Two aircraft from the same squadron piloted by Flight Lieutenants Emerton and Lockwood flew to Kallang on 5th February with instructions to bring back Air Vice-Marshal Pulford and his senior staff officers. Kallang was heavily raided by enemy aircraft while the two Hudsons were on the airfield but they escaped damage. Pulford, as already noted, decided not to leave Singapore at that stage. The Hudsons, carrying a number of passengers, and the four remaining Buffaloes of No. 453 Squadron, returned safely to P.2.[3]

No. 8 Squadron, as mentioned, was to have been re-equipped with Mark III Hudsons from Britain. Only six of these were eventually allotted, most of them needing overhaul, and the squadron was inactive until 6th February. That day a conference was held at group headquarters to consider the problem of congestion at P.2. It was proposed that No. 8 Squadron should hand over its few aircraft to No. 62 Squadron which

[3] No. 1 Squadron records contain a further reference to endeavours to bring AVM Pulford to Palembang. "On Feb 10 two aircraft . . . captains, F-Lts K. R. Smith and C. C. Verco, took off at 3.30 a.m. to bring out the AOC from Singapore. This was a particularly dangerous period to attempt to land there since the air was filled with enemy fighters and dive bombers and the shelling of the three northern aerodromes was intense. However, under cover of a dense pall of smoke from the burning oil tanks at the Naval Base, the aircraft reached Kallang just before dawn. The AOC was not prepared to leave Singapore, but Air Cmdre Staton and other senior RAF officers were carried to P.2. On arrival . . . Staton requested that another aircraft be sent to Singapore for the AOC, even though the chance of getting through in daylight hours was slight. F-Lt Smith, with the same crew, took off on their second trip at 1030 hours and this time returned with AVM Maltby and others, though the AOC . . . still chose to remain in Singapore. On the following day one further attempt was made to get through to Singapore but Group HQ preferred to cancel the order because of the inordinate risk involved."



R.A.A.F. Area boundaries

was also equipped with Hudson IIIs, and return to Australia as a complete unit for rearming, but the proposal was rejected.

One of the five R.A.F. squadrons in No. 225 Group, No. 34, was also unable to operate until early February, the aircraft of Nos. 62 and 27 were in a particularly poor state, and the aircraft of the other two units—the reinforcement squadrons (Nos. 84 and 211) each of which had set out from the Middle East with 24 aircraft—had already been seriously depleted.[4] These two squadrons were based on P.1 in company with the Malayan Volunteer Air Force, which, operating a flight of light aircraft, still did invaluable work. Now it was busy maintaining communications between P.1, P.2 and Lahat, making a reconnaissance twice daily over the Musi River approaches, and locating crashed aircraft.

In all, the group now had only 55 serviceable combat aircraft and these were being used to the utmost. Between the nights of 30th-31st January and 12th-13th February enemy concentrations at Ipoh, Alor Star, Penang, Singora docks and Kluang (twice) were all subjected to night attacks. To make these raids the bombers refuelled at Pakanbaru, Medan or Singapore. In addition, daily reconnaissance across the South China Sea to Borneo was maintained by No. 1 Squadron until 6th February.

Quite apart from enemy action, these long flights were extremely exacting. Violent monsoonal storms were in season and the skill and endurance of the crews were severely tested. They flew without VHF (very high frequency radio) and had no radio direction-finding equipment to aid them in homing on their bases, disabilities that made the lot of the fighter pilot particularly hazardous.

No. 226 Fighter Group, the headquarters of which were formed in Palembang by Air Commodore Vincent when he arrived on 1st February, maintained (as planned) a token flight of Hurricanes on Singapore Island until 9th February. The group was based on P.1 where lack of communication facilities caused delays in taking off for interception with enemy aircraft. It included Hurricanes and a few Buffaloes from Singapore but most of its total of about 50 Hurricanes had been flown off H.M.S. *Indomitable* with their guns still protected by anti-corrosive grease.[5] The task of cleaning these guns and making them ready for combat without the usual facilities delayed operations. Except for the commanding officers and flight commanders, the pilots of these aircraft had come direct from operational training units: that they proved capable of spirited combat was greatly to their credit. To improve the climb and manoeuvrability of their Hurricanes the four outside guns were removed; it was considered

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[4] The group's order of battle now was:

No. 1	Squadron RAAF	16 Hudson II
No. 8	,, ,,	6 Hudson III
No. 34	,, RAF	6 Blenheim IV
No. 62	,, ,,	10 Hudson III and 5 Blenheim I
No. 27	,, ,,	3 Blenheim I
No. 84	,, ,,	10 Blenheim IV
No. 211	,, ,,	4 Blenheim IV

[5] Of 48 aircraft off *Indomitable*, 33 flew to P.1 where 5 crashed on landing. The other 15 went to Singapore.

that the remaining eight guns would be adequate against the unarmoured Japanese fighter aircraft. All the technical work was performed under difficulties. Tool kits and battery chargers were too few and there were no battery-charging facilities at the aerodrome. Inevitably the standard of serviceability remained low.

Initially the fighters' main task was to escort shipping, but Japanese reconnaissance aircraft had not missed the increasing activity in the Palembang area and formations of enemy bombers delivered four heavy attacks on P.1—on 6th, 7th, 8th and 13th February. The aerodrome had received its first bombing attack on 23rd January from 27 unescorted bombers, but little damage resulted. When raiding was resumed the bombers had fighter escort; clearly the presence of the Hurricanes had been noted. On the 6th the defending fighters had short warning and lost four of their own aircraft while only one Zero was claimed in return. Next day the enemy combined a high-level bombing attack with a low-level attack by fighters. On the ground three Hurricanes were destroyed and eleven damaged; three more were shot down in combat; four unserviceable Blenheims on the ground and one Hudson which landed while the raid was in progress were also destroyed. The defenders claimed only one Zero. More warning was received of the next two raids. On the 8th interception was inconclusive but on the 13th the Hurricane pilots shot down 3 Navy Zeros and 2 Army Type-97 bombers for the loss of only one of their own aircraft.

On 12th February the group was reinforced by 8 Hurricanes—part of a shipment of 39 which, together with a pool of 15 pilots and the ground staff of three squadrons (Nos. 232, 258 and 605) had reached Batavia on the 4th. Nine more Hurricanes were flown in to P.1 next day while the aerodrome was under an air attack. Though short of fuel the incoming Hurricanes inevitably were drawn into the battle and 6 of them either crashed or were shot down.

A shortage of staff at Air Headquarters in Singapore had become serious through the progressive transfer of officers and men to the bomber and fighter groups in Sumatra. This was particularly marked with the cipher staff whose numbers had been depleted to a critical extent by the evacuation of women who had been engaged in that work. Though they worked fantastically long hours, the burden of this vital task became too great for the few who remained, and in the first week in February there was a complete breakdown in communications between Air Headquarters and Palembang. On 7th February therefore Abdair assumed operational control of all air units in Sumatra.

Air Vice-Marshal Maltby had (as already noted) moved from Singapore on the 10th to take up his new appointment as air officer commanding Westgroup which comprised all R.A.F. and R.A.A.F. units of Far East Command in Sumatra and Java. No suitable site was available for the headquarters of the group in south Sumatra and Abdair continued to control all operations until these could be set up in Java.

On 6th February one of the most notable reconnaissance flights of the campaign was made over the South China Sea. Already there had been indications that an enemy attack was imminent. Intelligence reports warned of the departure from Saigon of an enemy convoy which was to rendezvous in the shelter of the Anambas Islands. These reports were given credibility by the increase in enemy air activity over Banka and Billiton Islands. No. 1 Squadron's records attribute the reconnaissance on the 6th to the interception of a Japanese cipher message, which revealed that an enemy convoy was in fact assembling in the Anambas. The records describe the take-off from P.2 at 6.20 a.m. of a Hudson captained by Flying Officer Gibbes. There was no cloud cover for the aircraft on the long outward flight but, climbing to 15,000 feet as he approached the Anambas, Gibbes found cloud cover with "seven-tenths" density. When over Metak Island, the Hudson's crew saw 7 enemy fighters climbing towards them from 5,000 feet and 3 more coming in on their port quarter at 12,000 feet. Gibbes put the aircraft into a dive through cumulus cloud 5,000 feet below but not before he and his crew had sighted a cruiser, 4 destroyers and 4 merchant ships lying at anchor. Gibbes' second pilot, Flying Officer Jay,[6] was able to sketch the harbour and mark in the ships in their various positions. Enemy fighters still strove to attack the Hudson but Gibbes evaded them. With insufficient fuel to return to Palembang, Gibbes flew to Singapore Island, landed at Kallang, and reported to Air Vice-Marshal Pulford.

An attack on the enemy ships on the night of the 8th-9th by 9 Blenheims failed because the target was shrouded in low cloud. On the night of the 11th-12th 10 Blenheims again endeavoured to strike the enemy force but again failed for the same reason. By this time ABDA Command had received Intelligence information that the enemy force had been ordered to a position immediately north of Banka and Billiton Islands by the 13th. Wavell therefore ordered all shipping to be cleared from the Musi River, directed No. 225 Group Headquarters to plan a strike against the enemy force, and ordered a naval striking force, which had at last been assembled under Admiral Doorman, to move into the western waters of the Java Sea in readiness to attack the convoy. No. 1 Squadron records give the air striking force finally decided on as 23 Blenheims for an assault on the ships and 11 Hudsons (4 from No. 1, 2 from No. 8 and 5 from No. 62) for an attack on the enemy's southernmost air base at Kluang. When taking off soon after midnight 3 of the Blenheims crashed, 2 of them among trees close to the dispersal bays of No. 1 Squadron, and the third into a building when the pilot attempted to land again after taking off.[7] As the fires and exploding bombs from the crashed aircraft were endangering some of the Hudsons, the commander of No. 1 Squadron, Wing Commander Davis, led 4 of them down the aerodrome

[6] Sqn Ldr A. B. Jay, AFC, 407061. 1, 7 and 100 Sqns; CFI 1 OTU 1944-45. Clerk; of Burnside, SA; b. Kensington Gardens, SA, 2 Sep 1915.

[7] Many of the crew members of these Blenheim aircraft were Australians.

to a position near the point of take-off. The Hudsons were then sent off on their strike on Kluang.

The remaining Blenheims took off soon afterwards, but fortune was still unkind: the way to the target, itself covered by low cloud, was barred by heavy tropical thunderstorms and only five aircraft got through, one of these being forced to jettison its bomb-load. The Hudsons had fared rather better. All reached the target and the crews had the satisfaction of seeing their bombs hit the aerodrome, some hangars, and several other buildings. Anti-aircraft fire was intense and night fighters were encountered.[8] All the Hudsons returned safely to base. Each aircraft carried four 250-lb general purpose bombs with "stick" extensions. When one aircraft had flown for three-quarters of an hour on its return flight the crew discovered that three of the bombs were still "hung up" in the bomb bay. The captain, Flight Lieutenant Lockwood, turned back to the target and, as dawn was breaking, the three bombs were released and made direct hits on a hangar. An air reconnaissance on the 13th revealed that the enemy force had moved out from the Anambas; a large number of enemy transports with strong naval escort were sighted at sea to the north of Banka Island and on course for the entrance to the strait.

Abdair ordered No. 225 Group to discontinue all regular reconnaissance flights from the 7th so that the striking force in Sumatra could be increased; Reconnaissance Group in Java accepted all responsibility for such operations as from that date. Confusion followed. Reports received by the group through Abdair showed that Japanese naval forces were in strength to the south of Singapore Island, but poor communications had delayed these reports for from 5 to 7 hours and by then the position of the convoy had changed completely.[9] To add to the confusion there was a stream of shipping moving from Singapore to Java and friend and foe were not easily distinguishable from the air. By the 13th No. 225 Group Headquarters felt that despite orders to the contrary a reconnaissance from Palembang must be made to determine whether or not Sumatra was under immediate threat. One Hudson from No. 1 Squadron was therefore sent out that afternoon, and reported a concentration of Japanese ships north of Banka Island, which seemed to confirm that a landing in the Palembang area was imminent. The force (as reported in the squadron's records) "appeared to consist of one battleship, three or four cruisers and between twenty-five and thirty transports".[1] In fact (as

[8] From available records it appears that this was the first time the enemy used night fighters in this campaign.

[9] Though available references differ in stating the period for which this reconnaissance restraint was placed on 225 Group, and to the number of sorties, the restraint in itself serves to explain the perplexity expressed in the records of No. 1 Squadron which contain this passage: "For some reason best known to themselves Group HQ did not order for this day [13th February] the usual reconnaissance of 4 or 5 Hudsons to sweep the South China Sea which might have avoided the confusion and lack of appreciation which arose later in the day. A definite report from a properly planned search would have revealed the true situation and have been of enormous value to aircraft which proceeded on bombing missions on the following day."

[1] Of this sighting No. 1 Squadron diarist comments: "This detailed information was not known in the operations room at the time of briefing and in consequence aircraft from the various squadrons departed in search of different objectives."

enemy documents have since shown) it comprised 2 light cruisers and 8 destroyers, escorting 22 transports, with cover from 4 heavy cruisers, one light cruiser, 8 destroyers and a light aircraft carrier.

Maltby's despatch records that all available Blenheims were immediately sent to attack the enemy force, "but results were difficult to assess owing to darkness and rainstorms". The aircraft of Nos. 1 and 8 Squadrons were ordered to "bomb up" and stand by, but no orders to attack were issued that day. Every available bomber was prepared for action and just before dawn next day they began taking off. Five Hudsons from No. 8 Squadron were the first to leave. One of these touched the ground after take-off but became airborne again with several inches shorn from its propeller tips and the pilot kept it flying until there was sufficient light for a safe landing at P.1. The attack grew in intensity. Blenheims and Hudsons, diving through heavy anti-aircraft fire, chose the best targets offering. In attacking ships approaching the mouth of the Musi River several Hudsons from No. 8 Squadron were intercepted by fighters about 10 miles from their target, but cloud cover favoured them and they completed their bombing runs. The captain of one Hudson, Flight Lieutenant Douglas, after leading his flight to the target through cloud, dived "down sun" in an attack and then climbed again, apparently to repeat the manoeuvre. The aircraft, however, appeared to go out of control and was seen to crash into the sea; there were no survivors. Flight Lieutenant O'Brien and his crew scored direct hits on a transport that was seen later to be listing and on fire, and three other Hudsons, captained by Flight Lieutenants Diamond, Williams[2] and Brydon,[3] all recorded hits on ships.

It happened that fairly early in the battle the fighter strength of both Far East Command and the enemy were diverted from action over the Japanese convoy for a very significant reason. Early on the morning of the 14th all available Hurricanes were airborne as escort for the bombers setting out to attack the enemy ships. About 8 a.m. the observer corps warned of the approach of "a large hostile formation of enemy aircraft". By this time the Hurricane pilots were beyond range of radio telephone communication and could not be diverted for interception. The Japanese target was P.1. Bombers first drenched the aerodrome with light bombs and then their large escort of fighters swept it with gunfire. Almost immediately troop carriers droned over to drop two groups of parachutists totalling about 260 men. The paratroops landed in scrub at two points between 400 and 800 yards to the south and the west of the aerodrome. About the same time about 100 enemy paratroops descended over the oil refinery area several miles west from the aerodrome. One of the troop-carriers was shot down by anti-aircraft fire and another was forced to make an emergency landing. An attempt by the enemy troops to rush the aero-

[2] Sqn Ldr A. J. L. Williams, 260538. 1 and 6 Sqns. Public servant; of Strathfield, NSW; b. Ballarat, Vic, 12 Jan 1915.

[3] Sqn Ldr A. H. Brydon, DFC, 578. 1 and 107 Sqns; comd 78 Sqn 1944. Regular air force offr; of Armidale, NSW; b. Armidale, 14 Apr 1921.

drome was checked by the crews of the British anti-aircraft guns, now with 8 3.7-inch guns and 8 Bofors, the Dutch infantry force with its two aged armoured cars, and about 60 R.A.F. ground defence gunners from Nos. 258 and 605 Fighter Squadrons. There were casualties on both sides.

Meanwhile the returning Hurricane pilots, with their fuel and ammunition practically exhausted, were ordered to divert to P.2. Some did not receive the order and landed at P.1 where, in spite of the paratroop attack, they were refuelled before being sent on to P.2, whence they promptly went into action again against the main enemy invasion movement towards the river mouth.

With their ammunition spent the anti-aircraft guns were now withdrawn to Palembang town as were unarmed members of the air force. To deny the aerodrome to the enemy paratroops the 60 R.A.F. officers and men remained with some of the Dutch infantrymen. Anticipating efforts to reinforce the aerodrome defences the enemy paratroops formed an ambush on the road to the town. This the Japanese later turned into a roadblock by overturning vehicles and so prevented two attempts by the defenders to get support directly to their aerodrome force, though some of their troops succeeded in making a detour through the scrub and reaching P.1 where they assisted in evacuating wounded and unarmed men.

To the station commander, Wing Commander Maguire,[4] an attack in force that night seemed almost certain. As his men were now without food or water and their ammunition supply was very low, he decided to attempt a withdrawal after destroying material of any value to the enemy, including unserviceable aircraft. This done he led his party through the jungle towards the west coast of the island and, after a gruelling journey lasting seven days on which they destroyed stores of petrol and some rubber factories, they were able to make their way south and eventually rejoin their units in Java.

Enemy paratroops that landed in the refinery area had succeeded in entrenching themselves at Pladju. They were dislodged after fierce combat but the fires started during the fighting prevented effective demolition of the refinery. At Sungei Gerong the enemy had been held in check long enough to enable the defenders to complete their demolition work.

P.1 aerodrome had received no aid from the aircraft at P.2 for the imperative reason that the force under McCauley's command was desperately engaged in countering the major threat to Sumatra—the attempts of the invasion forces to reach and pass up the Musi River. McCauley had been instructed by the air officer commanding No. 225 Group (Air Commodore Hunter) to continue the attacks on the convoy from first light on the 15th. His force now consisted of 22 Hurricanes, 35 Blenheim Is and IVs (many of them unserviceable) and only 3 Hudsons. The cost of the battle over Banka Strait had been extremely severe to all squadrons

[4] Air Cmdre H. J. Maguire, DSO, OBE, RAF. 229 Sqn and 226 Wing; comd RAF Stn Palembang 1942. Regular air force offr; b. Derra Kilkishen, Co. Clare, Eire, 12 Apr 1912.

engaged and the two Australian squadrons, apart from their losses, had been temporarily reduced to a mere token force. An outstanding example of the determination and initiative with which the Hudson crews fought was provided by the crew captained by Diamond. Attacked by two Japanese Navy Zeros, their aircraft had its starboard engine put out of action, its starboard landing wheel shot away and its tail plane seriously damaged. But, with full throttle on the one serviceable engine, Diamond flew the Hudson up the Musi River at a height of only 100 feet and succeeded in reaching P.1 where he made a crash landing without injury to his crew or himself. Finding the aerodrome invested by Japanese paratroops, he led his crew to a Hudson standing on the runway—the No. 8 Squadron aircraft that had been landed with the tips missing from its propeller blades. Diamond tried but failed to get this aircraft off the ground; with its damaged propellers the best speed he could get was only 40 knots. A quick inspection showed all the other aircraft on the aerodrome to be unserviceable and so Diamond led his crew into adjacent paddy fields where, crawling over the leech-infested ground, they succeeded in evading a party of the enemy who pursued them with hand grenades. For 10 hours the crew kept on until they met a party of Allied troops with whom they made their way to Palembang town, returning to P.2 next day.

Of 5 Hudsons (2 from No. 1 Squadron and 3 from No. 62 Squadron) one, piloted by Gibbes, was the only aircraft to return. The other No. 1 Squadron Hudson, piloted by Lockwood, was last seen losing height with smoke pouring from one engine and two Zeros following it down in close pursuit. Gibbes and his crew, who scored a direct hit on a merchant ship, saw nothing more of the three No. 62 Squadron Hudsons and presumed that they too had been shot down.[5]

About 11.15 a.m. on the 14th, McCauley learned of the paratroop landings at P.1 from Hunter, who told him that that aerodrome was being evacuated and that preparations should be made for the evacuation of P.2. Some time later the actual order confirming this was received, together with instructions that all serviceable aircraft were to be flown to Batavia. In consequence all secret documents were destroyed, equipment, stores and rations collected for disposal, and about 20 Hudsons (7 of which were from No. 1 Squadron and 4 from No. 8) were laden with men and equipment and dispatched to Batavia. At McCauley's instructions the disposal of bombs, fuel and ammunition was deferred for last-minute demolition. No. 225 Group Headquarters, having destroyed everything of value to the enemy at their Palembang office, then moved across to P.2. But apparently the defending ground troops had been gaining the upper hand and reports coming in to P.2 stated that the Japanese paratroops had now been dealt with. Hunter therefore decided

[5] No precise record of aircraft losses in this battle was preserved. The RAF assessment is "six to eight of our aircraft were shot down or destroyed on landing in a damaged condition". Few of the bombers were undamaged when the battle ended. Japanese records show that their invasion force claimed to have shot down 9 "enemy" aircraft.

to recall the aircraft that had been flown to Batavia and to resume control of his headquarters from Palembang town. Because of a breakdown in the communications system, his message recalling the aircraft was never delivered.

The work of the ground staffs at P.2 was excellent. When they were ordered to prepare for the demolition of all unserviceable aircraft, a servicing party from No. 1 Squadron, led by Flight Sergeant Musicka, using improvised tools, including some taken from a steam roller, and a bayonet, fitted a new aileron to one Hudson and replaced an engine in another so that both were ready for service again.

When a fierce electrical storm disrupted the only communication (telephone) he had with No. 225 Group Headquarters in Palembang that night, McCauley was left with sole operational responsibility. The night was spent preparing the remaining bombers and the Hurricanes for resumption of the battle at dawn. A reconnaissance at first light showed that about 20 warships, transports and barges were steaming through Banka Strait, while other transports and landing barges were swarming round the Musi estuary. Heavy fog delayed the take-off for the attack but at 6.30 a.m. three Hudsons (one from No. 1 Squadron and two from No. 8) which had been retained for servicing when the others had been sent to Batavia became airborne just ahead of three Blenheims. Flying just above the fog the Hudsons were met over Palembang by enemy fighters but, diving into the fog again, they evaded attack. The aircraft from No. 1 Squadron made three attempts to leave the fog but each time enemy fighters were waiting for it and so, still using the fog as cover, it returned to P.2.

The two No. 8 Squadron Hudsons, captained by Flight Lieutenant Widmer and Flying Officer Lower,[6] evaded the Zeros and, coming out of the fog, saw 23 enemy ships. They attacked one vessel and scored near misses. One of the three Blenheims also got through the enemy fighter screen and it too scored near misses on a transport. The other two Blenheims diverted their attack to landing barges and sank five or six, all laden with troops. Five more bomber strikes were made on ships and barges during the day.

After the early stages of the battle enemy fighter interception ceased and the Hurricane pilots were able to devote their attention to gunnery sweeps over the troop-laden barges that were now proceeding in three groups up separate channels of the river. Hudson and Blenheim crews, when they had made their bombing runs, joined in the attacks on the barges, at least 20 of which were sunk. Direct bomb hits were scored on three transports, one of which was sunk and several others damaged. The bomber crews and Hurricane pilots between them claimed to have shot down at least three enemy fighters and to have damaged five more. Among the pilots of Hudson aircraft credited with either direct bomb

[6] Sqn Ldr J. Lower, 280654. 14, 8 and 6 Sqns; Controller 71 Wing 1943. Manufacturing chemist; of Aldgate, SA; b. Adelaide, 17 Feb 1919.

hits or near misses were Flying Officer Stumm of No. 8 Squadron and a R.A.F. pilot, Flying Officer Richards, temporarily serving with the same unit. On their last strike for the day the Hurricane pilots were given an opportunity to avenge their own losses. They were sent out to attack enemy aircraft sighted on a beach on the south-west coast of Banka Island. These were believed to be Zeros, stranded without fuel and unable to return to their carrier. The R.A.F. pilots believed (incorrectly, it proved) that the carrier had been sunk. Whatever their origin the Zeros made an easy and profitable target, and the Hurricane pilots, without opposition, destroyed most if not all of them.

On the morning of the 15th another force of enemy paratroops, about 100 strong, was dropped over P.1 aerodrome. This reinforcement and reports that the main enemy invasion force was on its way up the Musi caused the commander of the Dutch ground forces to withdraw to the south-west.[7] That day ABDA Command, aware of the fall of Singapore and conscious of the weight of the enemy's assault on the Palembang area, ordered all British units in Sumatra to withdraw to Java.

There was no way of estimating the cost of the air attack to the enemy in terms of casualties. Aircrew returning from their strikes were moved to make such comparisons as likening the river where the barges had been strafed and bombed to "a bowl of water into which a box of matches had been emptied". They spoke of horrifying scenes on the river banks which were littered with enemy dead.

Important among the reasons for the success of these air attacks was the direct briefing of the crews. Since communications with group headquarters had broken down McCauley was left to act on his own initiative. This he did promptly in response to reconnaissance sightings and combat crew reports. The crews received verbal orders only. This eliminated the delay inevitable when action depended on written briefs. The withdrawal of aircraft and the demolition work completed on the previous day had created difficulties, but enthusiasm stimulated by effective action made up for much of the disability. It was dramatically evident too that had McCauley not deferred the demolition of bombs, fuel and ammunition the assault could not have been made and the enemy would have escaped severe casualties.

Air action (Maltby wrote later) thus brought the landing to a standstill. The Japanese were punished heavily for their failure to locate P.2 aerodrome. Unfortunately there were no troops or light naval craft available in the area to take advantage of the situation.

Wavell had in fact been very actively striving to obtain both troops and naval forces for this purpose but the time factor placed both just beyond the Supreme Commander's reach. His subordinates in the field in Sumatra knew comparatively little of this though they did receive some hints that raised their hopes temporarily. In the meantime they were assess-

[7] The main Japanese force actually reached Palembang town about midnight on 15th-16th February.

ing the situation as best they could. Air Commodores Hunter and Vincent in Palembang had learned from the local Dutch territorial commander on the night of the 14th that the situation was well under control and had gained the impression that his forces were to make a drive that night to clear the Palembang area. But the Dutch Command must have issued very different orders, for the destruction of oil and rubber stocks in the town and in the refinery area began that same night, and next morning the air officers commanding found that the Dutch headquarters in the town had been closed and that the local commander himself, now believing it was too late to restore the position, was about to leave for Lahat. To embarrass the southward advance of the Japanese he proposed that "in one hour's time" the ferries across the river and all railhead facilities would be blown up. Therefore Hunter had no choice but to order the immediate evacuation from the town of all under his command. This was made possible by the determined action of the general manager of the Sumatra Railways who, despite contrary orders, delayed demolition and maintained the rail service to Oosthaven until the evacuation had been completed.

During the 15th seven unserviceable Hudsons were flown to Bandung. One of them carried Hunter to ABDA Command Headquarters to make his report on the situation. Abdair had already ordered that as many as possible of the Hudsons flown out on the previous day should return to assist in the Palembang evacuation. Surplus gear was stripped from these aircraft—in some instances even the guns were removed—and they were each able to carry from 12 to 14 passengers. The last Hudson left at dusk, its passengers including Wing Commander Davis.

Withdrawal from P.2 by road began about 10.30 a.m. on the 15th. The aerodrome was 25 miles from Prabumulih, the nearest railway station, where the troops were to entrain for Oosthaven. In spite of lack of transport the whole procedure was orderly and well directed. Successive parties were marched out, each man carrying a "swag" and one day's rations. All available vehicles were used to operate a shuttle service, picking up parties that had walked part of the way and driving them to within a few miles of the station then returning to pick up other parties. About 1,200 officers and men were moved in this way without confusion. Armed parties remained on the aerodrome until about 6 p.m. when a "withdrawal in depth" was ordered. Except for a small technical and defence detachment which remained for final aircraft servicing efforts, the whole evacuation operation ended about 6.30 p.m. when, led by McCauley, the last party marched out. After they had covered about five miles they were picked up by motor vehicles.

The detachment that had remained laboured through the night on several Blenheim bombers they had not been able to make serviceable that day. By first light on the 16th all but three were ready for take-off. The station armament officer and a small party of armed men stayed behind and, when the last of the serviceable Blenheims had taken off,

they destroyed all the remaining aircraft and joined the Dutch garrison in completing the denial plan. Then they too left for Oosthaven.

On the night of 16th-17th February, in response to an order from Abdair, Gibbes and his crew from No. 1 Squadron made a risky flight to Lahat with evacuation orders for Wing Commander Noble. Gibbes had also been instructed to fly on to Djambi aerodrome in the oilfield area to the north-west of Palembang for the same purpose. Noble reported that Djambi was already in Japanese hands. Gibbes therefore refuelled at Lahat in preparation for his return flight to Bandung. But the facilities were meagre and his crew had to use cans without even the benefit of a chamois leather filter. The result of this was that when the aircraft was approaching the coast of Java both engines stopped almost simultaneously because there was water in the fuel. Gibbes prepared to make a crash landing and at the same time switched the fuel feed over to a tank that had not been "topped up" at Lahat. As the Hudson was about to come down both engines picked up enough to enable the aircraft to climb again and continue flying. After a forced landing at Tjililitan, south of Batavia, the fuel system was drained and replenished before flying on to Bandung to end a journey that had occupied 15 hours' flying time.

Air Vice-Marshal Maltby's comment on the lack of troops to take advantage of the success achieved against the Japanese convoy by air attack took no account of action that had in fact been taken to provide a supporting force for the defenders—action that, in the event, was to be largely dissipated by the time factor. This was the hurried formation on 15th February of the equivalent of a brigade group including troops from the Middle East then on board the transport *Orcades* which had reached Oosthaven that day. This was placed under the command of Brigadier Steele,[8] an officer from the headquarters of I Australian Corps, two divisions of which were then destined for the Netherlands East Indies. Steele had accompanied the corps commander, Lieut-General Lavarack,[9] when, preceding his troops, he flew to Bandung to confer with the Supreme Commander. Had there been time, and an over-all command for the Dutch and British forces in the Palembang area, this force could have been moved north and might have added sufficient strength to the defence to deny the invaders until more substantial reinforcements arrived. In the circumstances this was deemed impossible; and by the 16th Wavell had ordered the evacuation of Sumatra.

In the wider scheme of things there had been a definite plan for very material army support for the defence of southern Sumatra. General Lavarack had visited Palembang before reporting to General Wavell at

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[8] Maj-Gen Sir Clive Steele, KBE, DSO, MC, VD. (1st AIF: Lt 5 and 6 Fd Coys.) CRE 6 Div 1939-40; CE I Corps 1940-42; E-in-C LHQ 1942-45. Consulting engineer; of Melbourne; b. Canterbury, Vic, 30 Sep 1892. Died 5 Aug 1955.

[9] Lt-Gen Sir John Lavarack, KCMG, KCVO, KBE, CB, DSO. (1st AIF: GSO1 4 Div 1917-19.) CGS Aust 1935-39; GOC Southern Cd 1939-40, 7 Div 1940-41, I Aust Corps 1941-42, First Aust Army 1942-44. Governor of Queensland 1946-57. Regular soldier; of Melbourne; b. Brisbane, 19 Dec 1885. Died 4 Dec 1957.

his headquarters at Bandung on 26th January. The Supreme Commander, determined to do his utmost to hold the line Burma-southern Sumatra-Java-Timor-Darwin until reinforcements in sufficient strength could be assembled to enable him to take the offensive, planned to use the 7th Australian Division in southern Sumatra. Lavarack, however, was convinced that the deployment of I Australian Corps in the Netherlands East Indies would be a grave error. His reasons were clearly stated in an appreciation dated 2nd February which influenced the Australian Government's policy on the issue.

This (time has since proved) accurately forecast not only the intentions of the Japanese but the timing of their achievement of them. It contended that the Australian divisions could not be established as an effective fighting force in time to save the islands; that it would be impossible to evacuate them and their equipment if, as appeared most probable, the Japanese succeeded in their assault on Sumatra and Java; and that, in this last event, Australia's safety would be jeopardised. After further conferences at Bandung and an exchange of communications between Lavarack and the Australian Prime Minister, Mr Curtin, Wavell countermanded his plan to use the Australian divisions in the East Indies.

The provision of a naval force with which the defenders of Sumatra might have followed up the temporary advantage gained through the air attacks was no less difficult than the provision of ground forces. Admiral Doorman's striking force, which had been ordered to move towards Banka Strait in the hope of intercepting the enemy seaborne force, had earlier been ordered by the Allied naval commander, Admiral Hart, to move out of range of air attack and was then south of Bali and about 800 miles from Banka Island. Some of the ships had been on convoy escort duty and required refuelling. This meant delay, but by the 14th the Dutch admiral had three of his own cruisers (*De Ruyter, Java* and *Tromp*) with H.M.A.S. *Hobart* and H.M.S. *Exeter,* in rendezvous, screened by 4 Dutch and 6 American destroyers. Banka Strait, which offered the shortest route to where the enemy force was likely to be found, was too narrow for manoeuvring under air attack and held the added danger of mines. Doorman was ordered to take the longer route through Gaspar Strait, the intention being that he should attack from the north in the hope of striking the enemy from the rear. The force, which moved at dusk on the 14th, met misfortune early—one of the Dutch destroyers struck a reef and was lost. As the squadron steamed round the north of Banka Island next day it was attacked by waves of bombers. The assault was made from high altitude and so without torpedoes and Doorman's force escaped damage except for that done to two of the American destroyers as a result of near bomb misses. But the enemy achieved their main purpose; Doorman, conscious of the risks of proceeding without cover against even heavier air attacks, and of the vital need to preserve his limited force, withdrew it again through Gaspar Strait leaving the enemy a seaway undisputed, at least by seaborne craft.

Consciousness of the vulnerability of southern Sumatra, and the grim experience of the enemy's capacity to follow each advantage gained as swiftly as possible, undoubtedly and perhaps understandably led the withdrawing forces to expect a quick Japanese drive to Oosthaven, and lack of a strong unified command in the field produced inevitable confusion. The staff at Oosthaven had been ordered to clear all troops from the port by midnight on the 16th and the evacuation had therefore to be completed without any further attempt to save the great quantity of vitally needed stores and equipment lying in the dock area. The truth that, as a result of the severity of the resistance to their landing operations, the Japanese had been forced to pause to lick their wounds became apparent after all the British forces had withdrawn to Java. This awareness of over-hasty evacuation and of the great value of the material left behind prompted Group Captain Nicholetts, who had been the R.A.F. base control officer, to organise a party of 50 volunteers from No. 605 Squadron R.A.F. to return to Oosthaven in the corvette H.M.A.S. *Ballarat*. On the 20th this party spent most of the day loading R.A.F. equipment and Bofors ammunition into the *Ballarat* and accomplishing further demolition. That this expedition, which promised to be hazardous, was carried out in safety emphasised still further that the Japanese had, in fact, received a serious check at Palembang and needed time to regain their momentum.

Invasion of the entire Netherlands East Indies was included in phase 1 of the Japanese operations plan. By mid-February "neutralisation" of the Philippines and Malaya had been achieved. This, in effect, had been the signal for the assault on Palembang.

The Japanese Command greatly feared the reinforcement of the Allied air forces; this fear underlined their urgent need to capture the East Indian bases as quickly as possible and at the same time prevent, if they could, Allied demolition of the islands' resources, particularly in oil. In keeping with this urgency they were pressing their three-pronged drive southward. The eastern and central naval forces having taken Menado in northern Celebes and Tarakan on the east coast of Borneo, the next move lay with the western force which, under the command of Admiral Ozawa, had been assigned the investment of Banka Island and the Palembang area.

The advanced elements of this force—part of the *229th Infantry Regiment* in 8 transports escorted by the cruiser *Sendai* and 4 destroyers—set out from Camranh Bay on 9th February. The main force—the major part of the *229th Regiment* and one battalion of the *230th Regiment*, in 14 transports escorted by a cruiser and 4 destroyers—left the same port on the 11th. Admiral Ozawa, in the cruiser *Chokai*, led the covering force—the *7th Cruiser Squadron* of 4 8-inch gun ships, one 5.5-inch gun cruiser, the carrier *Ryujo*, and 3 destroyers.

As the convoys and their escorts steamed towards the entrance to Banka Strait, Ozawa fanned out his naval forces to screen the operations and in doing so placed his ships right across the escape route from Singapore. The result was little short of massacre: British craft of almost every kind, crowded with troops and refugees were blasted by naval gunfire, air bombing and strafing. Few who made the exodus from Singapore after 12th February survived.

The advanced Japanese force was under orders to invade Banka Island while the main force was charged with the invasion of the Palembang area. The air support for the invasion was provided by the planes carried in *Ryujo*, by land-based naval air units, and by the army's *3rd Air Division*.

The paratroops who landed on the morning of the 14th had been from the *1st Airborne Raiding Group,* the first echelon of which took off from Kahang for P.1 aerodrome and the second from Kluang for the refinery area. The day was fine and smoke from the burning oil fires at Singapore drifted south over Sumatra so that pilots of the aircraft, flying at 9,000 feet, had difficulty in seeing the ground. Then, as they approached the Musi River, they encountered dense fog which forced them to turn back and come in at a lower altitude. Having picked up the river they followed its course to their target. Japanese aircrew later described the anti-aircraft fire from the aerodrome and the refinery area as "furious, but so inaccurate that it revealed the enemy's condition of unpreparedness". The paratroops were dropped from about 600 feet. After engaging in skirmishes and "throwing the enemy into confusion" Allied reinforcements which "rushed the highway connecting the aerodrome and the town were attacked and routed". At the refinery the paratroops met stiff resistance and were forced to use air raid shelters as trenches. The refinery at Pladju had been only slightly damaged and the paratroops had occupied it next day, permitting "immediate use with ease". The other refinery had been damaged by fire but could still be used.

When reinforced on the afternoon of the 15th the airborne force had left a guard at the aerodrome and moved on Palembang in combat formation. Late that afternoon the town was occupied, the advanced force disembarking at Palembang that night. About a week later the airborne force returned to its base.

A Japanese account of the approach of the invasion force records that the convoy with the advanced force was frequently attacked by aircraft, 9 of which, it was claimed, had been shot down. On the night of the 14th this force had moved into Muntok Harbour and disembarked without opposition (Banka Island was virtually undefended). An army amphibious element with the main force had begun to move up the Musi at 8.30 a.m. on the 15th. About 10 a.m. a reconnaissance aircraft had reported "three enemy cruisers and four destroyers sailing northward through Gaspar Strait" (Admiral Doorman's force). The first part of the convoy which had arrived at the mouth of the river had therefore been moved into the stream and the main convoy had been diverted northward, while the main Japanese naval force and all available air forces were prepared for action. In the afternoon aircraft from *Ryujo* and land-based planes attacked Doorman's squadron. When the Allied squadron turned south again the main Japanese convoy altered course for the Musi and, reaching the mouth of the river on the evening of the 16th, began moving up-stream. When, on the 24th, Japanese land forces had taken Gelumbang, about 30 miles south-west of Palembang, the *22nd Air Flotilla* was deployed at this base in strength.

CHAPTER 21

RETREAT FROM BURMA

IN his own words, General Wavell found Burma "a most important but somewhat distracting commitment". Operations in that area had no immediate effect on the defence of Malaya and the Netherlands East Indies (Wavell's most urgent task) beyond being a drain on reinforcements and equipment. He admitted later that he had miscalculated the extent of the Japanese preparations, believing that, while engaged in their assaults on the Philippines, Malaya and the Netherlands East Indies, they would not be able to undertake a serious attack on Burma.

On 1st January 1942, before Wavell actually took command of the ABDA Area, Air Vice-Marshal Stevenson had arrived in Rangoon to take over command of the air forces which Group Captain Manning had so effectively organised into a diminutive but resolute fighting force. He found he had the single squadron of the American Volunteer Group, which now had 21 serviceable Tomahawks, and No. 67 (Buffalo) Squadron R.A.F., with about 16 aircraft, as his only striking force. For reconnaissance he had No. 4 Flight, Indian Air Force, which reached Burma at the end of December equipped with Wapiti and Audax aircraft and, for communications, a Burma Air Force flight of Moth aircraft. There were 5 fighter and 7 bomber squadrons listed on the program for Burma. Stevenson considered that the defence needs called for 9 additional fighter squadrons, but regarded the promised total of 7 bomber squadrons as sufficient at that stage.[1]

There were all-weather runways fit for the heaviest types of aircraft and most of the airfields had all-weather satellites. The rice-fields were hard at this time of the year and a runway suitable for either bomber or fighter aircraft could be prepared in a week if labour was available. As already noted, the chief difficulty, apart from the acute shortage of aircraft, was the lack of raid warning at the airfields. One obsolete radar direction finding set had been installed in the Rangoon area and there was a series of hilltop observer points linked by a vulnerable and insecure telephone service. The airfields were also linked by telephone. The air headquarters staff was only in nucleus, Mingaladon alone had a station headquarters; and repair and maintenance facilities were almost non-existent.

So provided (or unprovided) Stevenson had to defend the base facilities at Rangoon, the docks, arriving and departing convoys, the adjacent oil installations at Syriam and Thilawa, the main air bases at Mingaladon

[1] Throughout the campaign the entire Hurricane force in Burma comprised only three squadrons (Nos. 17, 135 and 136) and never exceeded the strength of two.—Stevenson, Despatch, paras 22 and 24. Stevenson, of course, would assume that the seven bomber squadrons promised would be at full strength and that there would be facilities to maintain a reasonable rate of serviceability.

and Zayatkwin (about 30 miles north of Rangoon), and give the army forces fighter and bomber support. He undertook the task with the conviction that if Singapore fell the Japanese would attempt a "knock-out" blow against Rangoon, with perhaps as many as 600 aircraft sorties in a day.

A second squadron of the American Volunteer Group, promised by Generalissimo Chiang Kai-shek, did not arrive and No. 221 Group Headquarters on 5th January asked Air Headquarters, India, to press for it immediately because the group's fighter strength then stood at only 11 Tomahawks and 12 Buffaloes, whereas only the day before the enemy had put between 30 and 40 fighters over Rangoon.[2] As for Colonel Chennault, the A.V.G. commander, he was so gravely concerned about the lack of warning against enemy air attack that he still was very doubtful about leaving even one squadron in action for the defence of Rangoon.

For this threadbare air force, which continued to achieve the apparently impossible in holding the enemy's numerically superior air units at bay, the first reinforcements arrived on 7th January: No. 113 (Blenheim IV) Squadron R.A.F., from Egypt, landed at Mingaladon with 16 aircraft. About half the squadron's aircrew were Australians; its commander, Wing Commander Stidolph,[3] was a Rhodesian. Each crew brought with them a ground crew member who proved invaluable in the months to come. Though it signified the poverty of his force that the arrival of a single squadron should represent an increase in strength of about 60 per cent, Stevenson had resolved on an aggressive policy. In his own words he decided to "lean forward" to hit the enemy wherever and whenever he could with his total force.

This was an opportune time to strike at the enemy's base and, at 2 a.m. on the 8th, nine Blenheims began taking off for Bangkok, only a few hours after their arrival. The target was the dock area and the bomb-load, as for most of the Blenheim's strike missions in this campaign, was four 250-lb general purpose and four 25-lb incendiary bombs. All nine aircraft reached the target, their crews including the first all-Australian bombing crew to strike at the enemy from Burma—Flying Officers Bassingthwaite[4] and Gordon[5] and Sergeant McKerracher.[6] Two other Australians in the raid were Flight Lieutenant Lee[7] and Flying Officer

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[2] The day-to-day serviceability rate of these squadrons varied because both units lacked spare parts and servicing facilities. Thus the rate could change dramatically, as indicated here, from 21 Tomahawks on 1st January to only 11 on 5th January.

[3] W Cdr R. N. Stidolph, DFC, 37513, RAF. 221 Gp, 511 Sqn RAF; comd 113 Sqn RAF 1941-42, 61 Sqn RAF 1943-44, RAF Stn Portreath 1945, 299 Sqn RAF 1945-46. Regular air force offr; of Salisbury, Southern Rhodesia; b. Salisbury, 3 Aug 1915.

[4] Sqn Ldr G. W. N. Bassingthwaite, DFC, 404619. 113 and 27 Sqns RAF. Grazier; of Jandowae, Qld; b. Toowoomba, Qld, 17 May 1915.

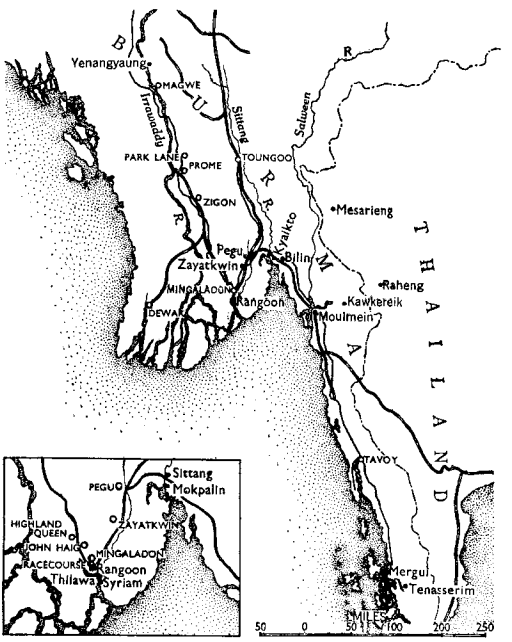
[5] Sqn Ldr D. F. Gordon, DFC, 402188. 113, 115, 1 Sqns RAF and 221 Gp RAF. Grazier; of Bungendore, NSW; b. Sydney, 11 Apr 1911.

[6] F-Lt W. J. McKerracher, DFM, 406099. 113 and 45 Sqns RAF. Clerk; of Cottesloe, WA; b. Tooting, London, 5 Nov 1909. Killed in aircraft accident 13 May 1944.

[7] F-Lt S. F. Lee, 407177. 113 and 223 Sqns RAF. Commercial traveller; of Bridgewater, SA; b. Sydney, 1 Dec 1915. Killed in action 4 Mar 1942.

Loane.[8] Two of the crews were provided by No. 60 Squadron which still fought the war without aircraft of its own. Bombing singly through intense anti-aircraft fire and many searchlight beams, the crews all returned to report explosions and fires which could be seen from a distance of 50 miles from the target. Next day (the 10th) the crews flew their aircraft to Lashio for a thorough servicing. It was ten days before they returned —a penalty the group had to pay for lack of servicing facilities at their main base.

Under the command of Lieut-General Hutton,[9] the army in Burma at this time comprised the 17th Indian Division on the Tenasserim Peninsula and the 1st Burma Division protecting the Southern Shan States.[1] The 17th Division troops were now losing ground under heavy pressure. Most of these troops lacked intensive training and were inexperienced in jungle warfare. By 19th January the Japanese had occupied Tavoy and the 17th Division troops at Mergui were withdrawn without being attacked. The Japanese, quickly turning their gains to account, then began to threaten Moulmein, while another enemy force, advancing through the Dawna Mountains by a narrow pass, captured Kawkereik on the 20th.



Burma's first fighter reinforcements—Nos. 17, 135 and 136 Hurricane Squadrons—had begun to arrive at intervals in the second half of January. The pilots had been moved from Britain to Cairo from where most of them, in aircraft issued to them there and fitted with long-range tanks, made the long flight to Burma with a Blenheim bomber for navigation escort.[2] Their number included several Australians. Those pilots not issued with aircraft were ferried to Rangoon by flying-boat, among them Squad-

[8] F-O O. L. Loane, 402514; 113 Sqn RAF. Student; of Chatswood, NSW; b. Chatswood, 14 Jan 1922. Killed in action 9 Sep 1942.

[9] Lt-Gen Sir Thomas Hutton, KCIE, CB, MC. CGS India 1941; GOC Burma 1942; Secretary, War Resources and Reconstruction Committees of Council (India) 1942-44; Secretary, Planning and Development Dept 1944-46. Regular soldier; b. 27 Mar 1890.

[1] At this stage two British battalions were included in these divisions: 1 Gloucester in the 17th Division and 2 KOYLI in 1st Burma Division.

[2] Some pilots from No. 136 Squadron were diverted as reinforcements for the Hurricane force at Singapore, but soon afterwards rejoined their squadron at Mingaladon.

ron Leader Carey,[3] an experienced Battle of Britain pilot, who had been appointed commanding officer of No. 135 Squadron, and an Australian, Pilot Officer Storey.[4] These officers arrived at Mingaladon on the 18th to find a handful of other pilots sharing between them the only three Hurricanes ready for service. At first Zayatkwin was used as a base by No. 135 Squadron, most of whose aircraft flew in on the 25th. But enemy bombing and low-level air gunnery forced them to move to Mingaladon with its infinitely better facilities.[5]

When sufficient pilots and Hurricanes had arrived they were organised into the three units, but the formations of fighters that went out to meet the enemy were often composite. No. 67 Squadron, now very weary from the strain of defending Rangoon and depleted in aircraft, was relieved about this time from combat.

In the last week of January the Japanese carried out their second major air offensive against Rangoon. There were day and night attacks, the day attacks by formations usually of 16 bombers with fighter cover, and the night attacks by one or two bombers. The Tomahawks and Hurricanes shot down perhaps 50 Japanese aircraft in this phase.

On the 28th an enemy pilot whose aircraft had been damaged in combat tried to ram a Tomahawk in the air, missed it and crashed. In a raid on the 29th both Carey and Storey took off to intercept, as did a number of A.V.G. pilots. This was the first time that Storey had been airborne for two months, and his first combat sortie. Climbing to 22,000 feet over unknown territory he soon found himself in combat with an equally unknown enemy. Six Japanese Army-97's were sighted flying just above the cloud base at 12,000 feet. Carey and Storey both dived on the enemy fighters, each getting in a burst of fire as their Hurricanes descended at more than 400 miles per hour. Avoiding "dog fighting" they climbed again, but the Japanese took cover in the clouds. As he returned to base Storey saw one enemy aircraft, obviously damaged, flying low over Mingaladon. Without warning it dived on to a Blenheim bomber in a revetment. When the dead Japanese pilot was examined later he had been shot from behind. Neither Carey nor Storey claimed the credit, though it probably belonged to one of them.

Though they were failing in their attempts to overcome Rangoon by air attack, the Japanese ground forces were still making headway. Stevenson's bombing force had been doing all it could to help the 17th Division. The Blenheims and the slow-flying, fixed undercarriage Lysanders had

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[3] Gp Capt F. R. Carey, CBE, DFC, AFC, DFM, 43132, RAF. 3, 43 and 245 Sqns RAF; comd 135 Sqn RAF 1941-42; Wing Leader Burwing and RAF Stn Alipore India 1942, 165 Wing India 1942-43; comd AFTU Armada Rd India 1943, 73 OTU ME 1944-45. Regular air force offr; of Brixton, London; b. Lindfield near Haywards Heath, Sussex, Eng, 7 May 1912.

[4] Sqn Ldr W. J. Storey, DFC, 400508. 135 Sqn RAF; Instructor 1572 Gunnery Flt India 1943, AFTU India 1943-44; OC Flying and CI Central Gunnery Schl Cressy 1944-45. School teacher; of Sale, Vic; b. Sale, 15 Nov 1915.

[5] In the words of one of the pilots who flew a Hurricane in from Egypt ". . . Mingaladon with its mile-long runways, its watch office and modern hangars, seemed incongruous, even a little fantastic, after that grimly primeval country which had straddled the greater part of our track since we had left the sea and crossed over into Burma."—Barry Sutton, *Jungle Pilot* (1946), p. 37.

attacked Raheng and Mesarieng on 21st and 22nd January, dropping 6,000 pounds of bombs on each target. They also attacked enemy troops in the Kawkereik Pass and bombed the town itself. The strain under which both the air and ground crews worked was intense. Men laboured unceasingly in the heat of the "dry season" sun which made metal so hot to the touch that it was unbearable; wet cloths had to be laid over gun panels to cool the ammunition. All the Hurricane crews had trouble with ammunition exploding in the wing magazines because of the heat. Refuelling was done with cans and chamois leather strainers. Maintenance crews, striving to make do with what equipment and tools they had, were deeply grateful to the European railway staff who gave them the freedom of their workshops and themselves undertook engineering work, even to the production of a propeller kit devised from very approximate drawings. Stimulated by the success of their operations, and particularly by the success of their fighters over Rangoon, the squadrons' morale was high. Though they were repeatedly bombed and strafed at their bases their casualties on the ground were few; they were adept at taking cover in the slit trenches and, happily, the standard of Japanese air-to-ground gunnery was poor.

For the aircrew the penalty of operating from bomb-cratered aerodromes was heavy, as when one Blenheim with an all-Australian crew, struck a crater when taking off for a raid on Bangkok on the night of 24th-25th January. The bomber was wrecked and the pilot, Sergeant Headlam,[6] and the navigator, Sergeant Odgers,[7] were killed; the gunner, Flight Sergeant Farrer,[8] was severely injured. In the attack on Bangkok the power station was severely damaged and fires started were still visible long after the crews had left the target. An enemy night fighter, the first reported in this campaign, was seen over the target. In a further raid on Bangkok on the night of the 27th Flying Officer Lee and his crew were attacked by a night fighter which had a searchlight mounted in the nose. The Blenheim evaded the attack. Retaliating for these damaging raids the Japanese bombed Mingaladon again and one of their delayed action bombs blew up the station armoury. About this time the Hurricane pilots were able to contradict the then frequent assertion that the Japanese fighter pilots never used parachutes; they reported the grim fate of one who did, only to be cut to pieces when he landed among some native troops.

Apart from Rangoon, Moulmein had been the chief Japanese target from the air. Between 3rd and 22nd of January it was attacked seven times. The reason for these raids became apparent when Japanese ground forces made a direct attack on the town on the 30th.

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[6] Sgt R. A. Headlam, 408075. 84 Sqn RAF. Jackeroo; of Bellerive, Tas, and Campbell Town, Tas; b. Launceston, Tas, 23 Aug 1917. Killed in aircraft accident 24 Jan 1942.

[7] Sgt H. C. Odgers, 400661. 84 Sqn RAF. Industrial chemist; of Clifton Hill, Vic; b. Clifton Hill, 19 Oct 1914. Killed in aircraft accident 24 Jan 1942.

[8] F-O J. M. Farrer, 400115. 84 Sqn RAF. Farmer; of Stawell, Vic; b. Stawell, 23 Jun 1915.

Moulmein was lost to the Japanese on the 31st. The air warning system was thus broken and the threat to Rangoon became more grave. No. 113 Squadron, and No. 1 Indian (Army Cooperation) Squadron, flying Lysanders, were assigned exclusively to direct army support. General Hutton and Air Vice-Marshal Stevenson met daily to select targets from the latest field reports. Ensuring the safety of their own ground troops was a problem in itself; targets usually were small and very difficult to locate and the maps were inadequate.[9]

Mingaladon was now under such constant bombing that No. 113 Squadron moved to Toungoo, 150 miles to the north, but the enemy raided Toungoo so heavily that on 4th February the unit moved back to Zayatkwin in the Rangoon area.

In one 24 hours' period (5th-6th February) Hurricanes and Tomahawks shot down 10 enemy aircraft, probably destroyed 10 more, escorted Lysanders on army support bombing sorties and shot down two enemy aircraft intercepted in a night attack by more than 13 bombers. There were no Allied losses.

For example, on 6th February six Hurricanes led by Storey had "scrambled" in response to an alert signal and were climbing to patrol over the base when the pilots heard the call of the controller with vocal if not tactical clarity announce: "Very many bandits; very, very high."[1] The Hurricanes were now at 16,000 feet. Storey saw about 30 enemy aircraft about six miles off at 21,000 feet. Two of the Hurricanes had lost formation, but he led the other four in an endeavour to climb between the enemy aircraft and the sun. They were detected, however, and three of the Japanese pilots tried to "jump" the Hurricanes. Storey spiralled vertically and then swept up into the sun. He succeeded in putting a burst of fire into one of the Japanese fighters and saw it crash. Two enemy pilots then dived on him, but, repeating his tactics, he caught the rear aircraft with two bursts of fire and saw it go into a spin and crash. Beam attacks on two more enemy fighters followed, but as he was himself attacked Storey was unable to see the results. Finally, with another enemy aircraft dead in line before him Storey found that he had exhausted all his ammunition. He therefore returned to base, to be credited with two "kills" confirmed and two probably shot down.[2] In the same battle the

[9] A report that on 21st February Blenheims had bombed and machine-gunned troops of the 17th Division at Mokpalin was closely investigated. Stevenson in his despatch (para 112) wrote: "I have failed to reach a firm conclusion. . . ." He explained that the attacking aircraft were reported to have been identified by roundels on the underside of the wings; Blenheims had roundels on the upper side. It was possible that the Japanese had used captured Blenheims. Another factor was the similarity between the plan silhouette of the Japanese Army 97 medium bomber and the Blenheim, and a further point was that enemy aircraft most probably were flying over Mokpalin about that time because their air effort was concentrated on the Sittang area only a few miles to the west.

[1] "Bandits" was the code word for enemy aircraft.

[2] Soon after this combat Carey, promoted to lead the Hurricane wing, was succeeded as C.O. No. 135 Sqn by Sqn Ldr Sutton, who promptly selected Storey as a flight commander. "If indeed the choice had not been self-evident," Sutton wrote later, ". . . I should feel gratified that this young Australian had got the chance to show his full worth not only as a pilot of exceptional ability, but as one of the best leaders of a formation I have ever seen. Before we had retreated from Burma Storey had a record which included five confirmed victories, besides some probables and some damaged." Sutton, pp. 77-8.

only other Australian pilot in the squadron, Sergeant McRae,[3] shot down an enemy fighter before being forced to retire from combat with a shoulder wound. The total enemy casualties for which the Hurricane formation was responsible were four shot down and confirmed, two "probables" and three damaged.

In anticipation of a possible withdrawal and to deprive the enemy of well-defined targets, particularly for night bombing which, with large numbers of small bombs, was becoming much too effective, "kutcha" airstrips—strips cut into the hard paddy land—were prepared.[4] These were made both in the Mingaladon area and up the Irrawaddy Valley to Prome, this last series to meet the needs of the army for air support should it be forced to withdraw up the Prome Road. These strips were kept as secret as possible and all first-line aircraft were flown to those adjacent to Mingaladon and Zayatkwin. The aircrews were driven to their quarters on the parent airfields each night and back again before dawn for take-off next day.

After the war Storey of No. 135 described a typical day in the life of a Hurricane pilot in this phase. After a night in which his quarters were perhaps bombed he would rise at 4 a.m. and drive some 25 or 30 miles to the "kutcha" strip. Thence he would fly his aircraft to Mingaladon in time for dawn "readiness". Breakfast would be taken during readiness, and the daylight hours occupied with "scrambles", bomber escorts, offensive sweeps, low-level attacks on specific targets, close support of army units, or reconnaissance. He would fly his aircraft to the dispersal strip at dusk, and then drive back to the base to dinner and bed —if night operations were not required.

If Rangoon was to be evacuated Stevenson intended to guard his fighter force by withdrawing it altogether from the parent aerodromes. Because of their additional range the bombers would be able to operate from Magwe, 220 miles north-west of Rangoon, while rearming and refuelling in the forward area. But the fighters, with their limited range, would be brought back along the Prome Road in steps of about 50 miles so that they could cover the retiring army columns. About this time Stevenson formed "X" Wing Headquarters to control all fighter and bomber operations in support of the army. The Allied fighter strength then stood at 44 Hurricanes and Tomahawks.[5]

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[3] F-O M. A. McRae, 400817; 135 Sqn RAF. Accountant; of Caulfield, Vic; b. Yea, Vic, 17 Feb 1914. Killed in aircraft accident 7 Jan 1943.

[4] These strips were made by native labour aided, in some instances, by a local steamroller. The earth, in drying out under a fierce sun after the water had subsided, soon became very dusty, and developed innumerable cracks which produced a cobble-stone effect. Damage to aircraft reached a rate as high as one in five; it was caused mainly to tail units. Ground crews fitted bamboo skids which sufficed for the flight to Magwe where proper repairs could be made. The "kutcha" strips round Mingaladon were named after popular brands of whisky—Johnnie Walker, Highland Queen, John Haig and Dewar—and the names survived; they were used in official despatches.

[5] Stevenson in his despatch (para 146) recorded that by 28th February the strength had "dwindled . . . to a low mark of under ten" through lack of maintenance, spares and damage in combat. The total rose again to 27 on 4th March, but from then until 10th March, the average was only about 17.

A second Blenheim bomber squadron, No. 45, in which a majority of the aircrew were Australians, arrived from the Middle East on 15th February.[6] Within an hour of landing a number of the crews went into action, among them three members of the R.A.A.F.—Flying Officer Maloney[7] and Flight Sergeants Carew-Reid[8] and Wilson[9]—who made low-level attacks on craft on the Salween River and on wharves and anti-aircraft positions at Moulmein.

The Japanese delivered their first air attack on Mandalay, Burma's second largest city, on the 18th, and on the same day Hutton and Stevenson reported to the Governor that the position was "more than serious". The enemy first provided what Stevenson regarded as a really satisfactory target on 21st February—a column of 300 or more vehicles, a mixture of motor transport and ox carts, on the road between Bilin and Kyaikto. The total fighter strength from the Rangoon defences and such serviceable bombers as were available went into attack. Thirty-eight fighter and eight Blenheim sorties were made. Direct bomb hits and gunfire caused much damage. But this attack, though it checked the enemy's progress, was insufficient to prevent their thrust to the Sittang Bridge which they achieved by a flanking movement, attacking the British troops in the rear. On the 20th the 17th Division was ordered to withdraw behind the Sittang. That day Hutton and Stevenson attended a conference at Government House in Rangoon at which it was decided to begin evacuation measures that would not be detrimental to the actual defence of the city. It was agreed that once the airfields and the warning system at Rangoon had been lost the only way to maintain air support for the army would be to establish a base organisation in India, and operational landing grounds at Akyab on the Arakan coast, and at Magwe, with advanced landing grounds in the Rangoon area.

Magwe, a civil airport, without dispersal pens or living quarters, was chosen as the Upper Burma base because it lay behind two lines of the observer corps system, one down the Salween Valley and the other down the Irrawaddy Valley. The R.D.F. set would be moved from Rangoon to Magwe. A request was made to Air Headquarters, India, for air transport to be flown to Magwe so that a shuttle service could be operated between that base and Akyab. Transport to India from Akyab would be by sea. In all Stevenson had 3,000 men to move, most of them from the Rangoon area. Hutton, meanwhile, had set up a rear headquarters at Maymyo, to the east of Mandalay on the Lashio Road.

Between the 16th and 23rd February the total number of bomber sorties by Norgroup as No. 221 Group had now been named had mounted to

[6] To allow ground staff to accompany the squadron on its flight from the Middle East some aircrew were sent by sea. They reached Calcutta three days before the squadron made its last sortie while based in Burma.

[7] Sqn Ldr J. W. Maloney, DFC, 406252. 45, 113, 37 and 117 Sqns RAF; comd 33 Sqn 1945-46. Clerk; of Kalgoorlie, WA; b. Kalgoorlie, 18 May 1920.

[8] F-Lt D. McK. Carew-Reid, 406102. 45, 113 Sqns RAF and 167 Wing RAF. Miner; of Coolgardie, WA; b. Perth, WA, 1 Sep 1913.

[9] F-Lt W. R. Wilson, 402211. 45, 113 and 354 Sqns RAF; 7 and 100 Sqns. Clerk; of Brisbane; b. Goondiwindi, Qld, 17 Mar 1915.

102 in which 89,992 pounds of bombs had been dropped in low-flying attacks, most of which had been followed by strafing runs.

A third and last attempt to wrest air superiority from the Allies over Rangoon was made by the Japanese air units between the 24th and 26th. Though they sent over more than 166 aircraft they were again overwhelmingly defeated, losing 37 aircraft known to be destroyed and probably 7 more. The fall of Singapore on the 15th had, as anticipated, led to an increase in the enemy's air strength. On the 26th Japanese aircraft made three successive attempts to break through the Allied defences and brought an even greater number of aircraft into the attack. Stevenson summed up the air battle for Rangoon thus:

Such wastage had been inflicted on the enemy that thereafter he never attempted to enter our warning zone round Rangoon until the city was captured and the air bases were in his hands . . . a claimed loss of 130 enemy bombers and fighters was inflicted on the enemy with 61 claimed as probably destroyed—the greater proportion falling to the guns of the A.V.G.[1] Counter-offensive action by our fighters and bombers to reduce the scale of attack had inflicted a loss of not less than 28 enemy aircraft destroyed on the ground, not counting those destroyed by our bombing attacks. Air superiority was achieved over Rangoon and maintained until it fell on 8th March. The A.V.G.—first in the field—fought with ready devotion and resolute gallantry.[2]

The A.V.G. and the Hurricane squadrons fought well together. A wing-leader system was introduced and there were two radio-telephone sets in the operations room for the control of the battle—on different frequencies, one for each force.[3] The principles of fighting adopted differed in one notable way from those used in the Western theatre. The Japanese fighter had one particular advantage—it was highly manoeuvrable. To counter this the Allied fighters gained altitude and dived to attack, taking advantage of both height and the sun. They would then break away in a half roll or aileron turn and climb again for another attack. When the enemy fighters endeavoured to tempt them by coming in high, the Allied fighters would "lean back" on Rangoon and hold their attack until the enemy either lost height to engage them or turned for home. The Hurricane pilots alone were competent in night fighting and three enemy aircraft were shot down in flames in such combat, but limited strength and constant daylight readiness prevented night interception except on rare occasions. Experience in fighter interception of bombers had proved that the heavy types should not be attacked from above or astern because the Japanese had mounted heavy armament, including a "spray" type of machine-gun, in the fin. Since these aircraft had little or no armament

[1] Of the assessment of claims, Stevenson wrote in his despatch (para 85): "There was a little feeling in the A.V.G. on the assessment of results. Consequently I held a meeting with the A.V.G. squadron commander, the wing leader and [R.A.F.] squadron commanders, at which it was agreed that the standard of assessment should be that obtaining in Fighter Command at home. Colonel Chennault was informed. Combat reports by pilots were initialled by squadron commanders. The claim was then admitted. Previous claims by the A.V.G. for aircraft destroyed in the air were agreed at this meeting."

[2] Stevenson, Despatch, paras 74 and 77.

[3] For this reason a Hurricane pilot frequently accompanied an AVG formation so that its movements could be relayed to the base on the Hurricane frequency and so that there was intercommunication between AVG and RAF formations while airborne.

underneath, they were very vulnerable to attack from below when formations had been broken up. Much of the success of Allied fighters against enemy bombers had been a result of tactics based on these facts.

In the beginning the Japanese bombers came over with their navigation lights on; they very soon desisted. The R.A.F. pilots bore almost the entire brunt of night operations. The responsibility for the morale of the people of Rangoon weighed heavily on them and night attacks on the city must, they felt, be countered. An enemy aircraft coming down at night in flames was certainly heartening for the population.[4] The enemy bombers came only in moonlight which meant that the intercepting pilots had some visual reference on the ground to guide them. On returning to base they would line up their approach to the runway from the lakes that lay to the north of Rangoon and then descend until they could distinguish the hooded runway lights by which they landed.[5] But the strain on pilots and aircraft became so great that night interception had to be limited to occasions of urgency and even then only when aircraft and pilots could be spared.

The British Prime Minister had already paid high tribute to the achievements of the A.V.G. "The victories of these Americans over the rice paddies," Mr Churchill cabled to Dorman-Smith, "are comparable in character if not in scope with those won by the R.A.F. over the hopfields of Kent in the Battle of Britain." Chennault later quoted Stevenson as observing that, whereas the ratio of British to German planes in the Battle of Britain had been one-to-four, the ratio of Anglo-American fighters to Japanese planes over Rangoon had ranged from one-to-four to four-to-fourteen.[6]

Denied Rangoon, the enemy had assailed Mingaladon. On 25th February, just as 4 Blenheims of No. 45 Squadron landed for refuelling after an attack on Moulmein, 16 enemy bombers attacked the aerodrome. Most of the Blenheim crews reached shelter in time, but Sergeant McNamara,[7] one of the Australians from No. 84 Squadron who had reached Burma from Sabang when the Japanese overran Sumatra, was killed. Five Blenheims were destroyed on the ground, one all-Australian crew—Flying Officers Eve,[8] Kemp[9] and Bain[1]—losing their second aircraft in seven days.

[4] Flame "blinkers" were attached to the engine exhaust ports of the Hurricanes, and a flare path of lights, hooded so that they could be seen only from low approach altitude, was set out on the runway.

[5] Only once did the AVG with their less suitable aircraft undertake a night operation and then a landing aircraft collided with a jeep with headlights on to serve as a guide; both the pilot and the jeep driver were killed and the aircraft and jeep completely wrecked.

[6] Chennault, p. 131.

[7] Sgt J. C. McNamara, 406459. 211, 84 Sqns RAF. Clerk; of Mt Hawthorn, WA; b. Norwood, SA, 26 May 1916. Killed in air raid 25 Feb 1942. This pilot and his crew had already identified themselves among the Allied squadrons in Burma as "McNamara's Circus"—the inscription on the nose of their aircraft. In their own unorthodox way they increased the fire-power of their Blenheim by throwing incendiary bombs through the camera hatch, a highly dangerous practice that typified their attitude to air combat.

[8] P-Lt D. G. Eve, 407319; 45 Sqn RAF. Fireman; of Everard Park, SA; b. Adelaide, 26 Jun 1918.

[9] Sqn Ldr G. E. Kemp, 400536. 45 Sqn RAF and 43 Sqn; Operations Offr and Staff Navigation Offr AHQ Bengal Cd 1942-44. Bank clerk; of Balwyn, Vic; b. Melbourne, 15 May 1908.

[1] Sqn Ldr N. Bain, 400550. 45 and 355 Sqns RAF. Clerk; of Blackburn, Vic; b. Romsey, Vic, 1 Nov 1913.

When a mixed force of Hurricanes intercepted enemy aircraft over Moulmein on 26th February, Wing Commander Carey shot down three, and an Australian pilot, Flight Lieutenant Cotton,[2] was credited with two—one shot down and one destroyed on the ground. Later that morning, when their base was attacked by Zero fighters, Cotton took off for interception in the only Hurricane then on stand-by. He shot down one aircraft and then while climbing for a fresh attack, he was set on by an enemy fighter. The Japanese pilot put a burst of gunfire into the Hurricane, shattering Cotton's left leg and damaging both his aircraft's fuel tanks. Cotton succeeded in bringing his aircraft back to base and making a perfect landing. When it stopped taxiing he collapsed over the controls, overcome by loss of blood and the severity of his wounds.

General Wavell who, after the dissolution of ABDA Command on 25th February, was once more Commander-in-Chief, India, held a conference in Rangoon with his field commanders on 1st-2nd March. At this conference Stevenson reported that with only 20 serviceable Hurricanes his force would no longer be able to deny the enemy freedom of air action. Its bombing effort would be limited to that of a "quickly dwindling force of 16 bombers".

The end of the battle for Lower Burma was now in sight. General Sir Harold Alexander,[3] who succeeded General Hutton to the command in Burma on 4th March, arrived that day at Magwe. After visiting the critical Pegu front where the 17th Division was deeply involved, Alexander decided that the only possible way to save the situation was to achieve a junction of the 17th and 1st Burma Divisions, the forward positions of which were now about 40 miles apart. The 1st Burma Division had just handed over the defence of the Southern Shan States to the Chinese VI Army. The 17th Division had been recently reinforced by the 7th Armoured Brigade from the Middle East. But on 5th March the Japanese, by an encircling movement, succeeded in taking Pegu and in cutting the Rangoon-Mandalay Road. When attempts to reopen the road failed, Alexander, weighing the many disabilities of his forces, decided that the capital could no longer be held. He therefore planned the regrouping of his two divisions to the north in the Irrawaddy Valley and, at midnight on 6th March, gave the order that put the Rangoon denial scheme into operation.

The Blenheim bomber crews, meanwhile, had been striving to assail the enemy wherever a target showed. On 4th March No. 113 Squadron aircraft attacked enemy positions along the Sittang River. In this action one Blenheim, piloted by Flight Lieutenant Lee, who already had won a reputation as a resolute combat pilot, was attacked by four Zeros,

[2] Sqn Ldr M. C. C. Cotton, DFC, 407041. 43 Sqn; 165 and 293 Wings RAF; comd 17 Sqn RAF 1942-43. Irrigation officer; of Broken Hill, NSW; b. Broken Hill, 27 Mar 1917.

[3] Field Marshal Rt Hon Earl Alexander, KG, GCB, GCMG, CSI, DSO, MC. GOC 1 Div 1938-40; GOC-in-C Southern Cd 1940-42; GOC Burma 1942; C-in-C ME 1942-43, Allied Armies in Italy 1943-44; Supreme Commander Mediterranean Theatre 1944-45. Governor-General of Canada 1945-52. Regular soldier; b. Co. Tyrone, Ireland, 10 Dec 1891.

three of them from the rear and one head-on. Lee was mortally wounded by gunfire and the bomber crashed. The gunner, Sergeant Walker,[4] struggled from the wreckage unhurt. As Lee's wounds had been fatal Walker was unable to aid him. While he was looking for the observer, Sergeant Brett,[5] the Zeros returned, and dived on the stricken Blenheim, raking it with gunfire and setting it on fire. Walker rolled under the bomber's tail to take cover and escaped the new attack. When that had passed he found that Brett also had been killed. Walker then tramped through the jungle for two days until he met some friendly Burmans who guided him to a unit of the Burma Rifles with whose assistance he returned to Rangoon. Two days later No. 113 Squadron flew its last combat sortie from a base in Burma. In less than two months the squadron had flown 174 sorties, attacking 41 targets; these were in addition to many reconnaissance flights.

From whatever point the Allied commanders viewed it, the loss of Rangoon was a major tragedy. Both the British and Chinese armies had lost their vital supply line from the sea. The British forces, left to fight in the Irrawaddy Valley to guard the Mandalay Road and access to the precious Yenangyaung oilfields, now had no lines of communication behind them. The Chinese forces, holding the Allies' left flank in the Sittang Valley, were threatened with atrophy because the enemy now held the southern span of the vital north-south railway. It was along this railway that, until now, American lend-lease supplies had been carried from Rangoon, northward for 300 miles to Mandalay and thence north-east to Lashio, the southern terminal of the Burma Road. And it was along this railway, too, with its secondary branch reaching 250 miles northward from Mandalay to Myitkyina, that the strategy of the whole war in Burma was now woven. The enemy, on the other hand, had gained a means of supply of immense value; they could move very large forces and huge quantities of equipment into Burma by sea instead of having to rely on the restricted and difficult land route from Thailand.

As for the R.A.F. and the A.V.G., they were much more vulnerable and much less able to give effective aid to the ground forces. It is true that immediately after the fall of Rangoon there was something of a lull in the fighting both in the air and on the ground. The enemy were drawing breath and consolidating their latest and most valuable gain. But Wavell had no illusions. To him it was obvious that the whole of Burma might be occupied and that both Ceylon and India were under serious threat.[6]

In February a new and remarkable American figure had appeared in the China-India-Burma theatre: Lieut-General Joseph W. Stilwell had reached Chungking to take up duty as American military adviser to

[4] W-O L. Walker, DFC, 627807, RAF. 24, 113, 115 and 187 Sqns RAF. Cloth finisher; of Batley, Yorkshire, Eng; b. Batley, 16 Apr 1910.

[5] Sgt K. W. Brett, 402123, RNZAF; 113 Sqn RAF. Farmer; of Manakau, NZ; b. Wellington, NZ, 3 Nov 1915. Killed in action 4 Mar 1942.

[6] A. P. Wavell, *Despatch on Operations in Eastern Theatre, Based on India, from March 1942 to December 31st, 1942*, para 2.

Generalissimo Chiang Kai-shek and commander of the Chinese V and VI Armies, then pushing into north-east Burma. Stilwell, who had twice previously served in China, was planning a drive with his Chinese forces down the Sittang Valley, to begin about mid-April.

After a brief pause in air operations there began a bitter struggle in which the combined R.A.F.-A.V.G. force then in north Burma with about 30 serviceable fighters and 12 Blenheim bombers, faced a Japanese force estimated at 14 air regiments based in southern Burma and Thailand, with a front-line strength of between 400 and 500 aircraft. After the drama of the Rangoon air battles the tactics for each side changed to those of constant watchfulness for the moment when the other might be caught off guard and a blow struck against grounded aircraft or other vital targets.

The Allied air forces at Magwe, about 250 miles north from Rangoon, were using the A.V.G's old training field at Toungoo as one refuelling point. From here the Tomahawks could strike deep into Thailand and south Burma. This they promptly did, catching the enemy napping at a new fighter airfield about 10 miles from Moulmein. They left 15 fires (presumably aircraft) burning there before going on to destroy three enemy bombers and a transport on Moulmein aerodrome.

When the decision to evacuate Rangoon was reached Stevenson had moved "X" Wing Headquarters to Zigon, the first of the "kutcha" strips built to cover the army's withdrawal. A small R.A.F. party remained to demolish all of value in the headquarters premises and then to assist in the same dismal task at Mingaladon, before joining the army with whom they would withdraw from Burma.

On 7th-8th March operations were hampered by a heavy haze and a vast shroud of smoke which rose to 15,000 feet from the Rangoon demolitions and spread northwards over the crucial area of ground operations. Under this pall on the 7th the Allied fighters held the enemy air force at bay. Four pilots from Nos. 135 and 136 Squadrons, including one Australian, Storey, had been left at Mingaladon to hold on as long as possible. They were ordered to Zigon late on the 7th. The last ship cleared the harbour safely, the last demolition charge was fired without interference and Alexander's great mechanised column, 40 miles long, and extremely vulnerable to air attack, having fought and won a stiff battle to break through a Japanese road-block, withdrew unmolested by aircraft up the Prome Road. As with General MacArthur's retreating columns in the Philippines, so with this great withdrawal, the much more powerful Japanese air force unwittingly spared an army, confined to one long winding road, the agony of air attack.

"X" Wing Headquarters moved on the night of 9th March from Zigon to Park Lane, another of the improvised strips, to the north of Prome. On the 11th it moved again, this time to Magwe where it was disbanded as such. All the units under Stevenson's command were then re-formed. To remain based at Magwe, a new wing—Burwing—was created. Comprising No. 45 (Blenheim) Squadron, No. 17 (Hurricane) Squadron, the

remainder of the A.V.G. squadron, and the staff manning the R.D.F. station, it began operations on 18th March under the operational control of General Alexander, with Group Captain Broughall[7] in command.

At Akyab, where he set up his own headquarters on 12th March, Stevenson formed Akwing under the command of Group Captain Singer[8] and made up from No. 135 Squadron, now flying obsolete Hurricane Is (and one Hurricane II), a small communications flight, and the Hudson general reconnaissance flight.[9] This force was to be built up by the addition of No. 113 Squadron when Blenheims were available, and the reconnaissance flight was to be increased to squadron strength. What serviceable aircraft remained to No. 113 were flown to Dum Dum, the airport of Calcutta, on the 12th. Several members of the ground staff went with the aircraft and the remainder were attached to No. 45 Squadron at Magwe. In the meantime No. 45 had been actively supporting the army by attacking a variety of targets on which they dropped 31,500 pounds of bombs.

Often the Blenheim crews were subjected to fierce enemy fighter interception, as when one of them, attacking in the Toungoo area, was attacked by as many as 16 fighters within 25 minutes. The gunner, an Australian—Flight Sergeant Gardiner[1]—succeeded in shooting one of them down but an explosive bullet, fired from another enemy fighter, struck his gun barrel, splinters from which entered his arm. When the Blenheim reached base the crew counted 57 bullet holes in the fuselage.

Another Blenheim, with an all-Australian crew, was making a low-level reconnaissance flight on 11th March when the pilot, Sergeant Smyth,[2] was mortally wounded by small-arms fire from the ground. When he collapsed, the navigator, Sergeant Golder,[3] seized the controls while calling to the gunner, Sergeant Alt,[4] to lift the pilot from his seat. Between them Golder and Alt—neither of whom had had more than a few hours of initial training as a pilot—brought the Blenheim back over the base at Magwe. They dropped a message stating that Smyth had been

[7] Gp Capt H. S. Broughall, MC, DFC, RAF. Air Staff duties HQ 13(F) Gp 1939-40; comd 215 Sqn RAF 1940, RAF Stn Speke 1941, HQ 267 Wing RAF 1941-42, RAF Stn Jessore 1942, 170 Wing RAF India 1942-44. Regular air force offr; of Anglesey, Wales; b. Toronto, Canada, 6 Oct 1897. Died 18 Apr 1955.

[8] Air Cmdre N. C. Singer, CBE, DSO, DFC, RAF. Comd 6 Sqn RAF 1938-40; Air Staff duties HQ Bomber Cd 1940; comd 101 Sqn RAF 1940-41, RAF Stn Wattisham 1941-42; comd and SASO 221 Gp Burma 1942; Operations Offr AHQ Bengal Cd 1942-43; comd 167 Wing RAF India 1943-44; SASO 38 Gp RAF 1945-46. Regular air force offr; b. Inverurie, Scotland, 25 Dec 1906.

[9] At Akyab on 9th March Stevenson met Air Marshal Sir Richard Peirse who, when ABDA Command dissolved, had been appointed AOC-in-C, Air Forces in India. Peirse instructed him to maintain the two mixed wings, to support the army in Burma, to organise the air defence of Calcutta, Asansol and Tatanagar about 100 miles north-west of Calcutta, and of the Digboi oil installations in Assam. He was also to continue offensive bombing operations from India in support of the army in Burma, to maintain air reconnaissance, and attack enemy shipping in the Bay of Bengal.—Stevenson, Despatch, paras 178-9.

[1] F-Lt K. A. Gardiner, 404291. 45, 60, 37 Sqns RAF and 18 NEI Sqn. Factory employee; of Wynnum, Qld; b. 18 Mar 1917.

[2] Sgt D. J. Smyth, 406118; 45 Sqn RAF. Bank clerk; of Cottesloe, WA; b. Malvern, Vic, 1 Dec 1920. Died of wounds 11 Mar 1942.

[3] F-Lt D. A. Golder, 400531. 450 Sqn, 45 Sqn RAF; 224 Gp and 205 Sqn RAF; Navigation Offr Southern Area 1944-45. Sales clerk; of Burwood, Vic; b. Glenferrie, Vic, 27 Jun 1914.

[4] F-Lt J. J. Alt, 402195. 45 and 205 Sqns RAF and 224 Gp RAF. Business manager; of Kensington, NSW; b. Wyong, NSW, 24 Mar 1917.

wounded, fatally they believed, but that they proposed to attempt a landing. If this was approved they would expect a green light, if not a red one. The message drifted away from the base and when the Blenheim made its approach a red Very light was fired, the controller, unaware of the crew's plight, intending that the landing should be delayed. Golder and Alt then decided to bale out, but first, because they thought there might be a remote chance that the pilot might yet live, they released his body with a parachute attached. When the body was recovered on the ground it was found that Smyth had been killed by the initial enemy ground fire. Alt parachuted safely and landed not far from where the Blenheim crashed, but Golder, apparently having struck his head as he baled out, was unconscious when he landed. He recovered, was found next day and brought in from a near-by village.[5]

Burwing's first strike from Magwe was against their old base, Mingaladon where, on 20th March, a reconnaissance crew had detected more than 50 aircraft on the ground. On the morning of the 21st 9 Blenheims of No. 45 Squadron, supported by 10 Hurricanes, attacked from Magwe. Between them they wrecked 16 Japanese aircraft on the ground and shot down 11, two of which were claimed by the bomber crews who withstood attacks by 18 enemy fighters on the return flight.[6] Though some of the Hurricanes were damaged by enemy fire only one crashed and it in friendly territory through lack of fuel after combat. Broughall planned to repeat the attack that afternoon but enemy retaliation forestalled him. Even as the crews were being briefed warning came of the approach of Japanese bomber formations. The warning was too short and the number of serviceable aircraft too few. By-passing the radar screen, which covered the south-eastern approaches to the aerodrome, the enemy aircraft swung in from the north-east. They came in such force that the belated attempts at interception by four Hurricanes and three Tomahawks were virtually futile. The enemy attack was sustained and 25 hours later the Magwe base was stricken—the work of 230 enemy aircraft which had dropped more than 200 tons of bombs. Nine Blenheims and 3 Tomahawks had been destroyed on the ground with 5 Blenheims seriously damaged. Three of the 4 Hurricanes had been shot down. There remained 6 Blenheims, 11 Hurricanes and 3 Tomahawks. Vulnerable and useless for immediate combat, all these aircraft were withdrawn—the Tomahawks to Loiwing and the remainder to Akyab.

The Japanese quickly followed their success at Magwe with a comparable assault on Akyab. Blatant in their strength, they sent waves of attacking aircraft against this base on three days—23rd, 24th and 27th. The Hurricanes shot down 4 enemy aircraft and probably destroyed 3 for a loss of 6 of their own aircraft in combat, and 7 and a Valentia

[5] General Alexander, who had seen the airmen bale out, sent for Alt (Golder was then in hospital) and personally commended the crew. Air Vice-Marshal Stevenson, who had been flown by this crew from Rangoon to Magwe when the capital was evacuated, later, as AOC Bengal Command, selected Golder and Alt as members of his personal crew.

[6] This operation by the Blenheim crews was quoted in tactical records as a fine example of the value of tight formation and the destructive power of gunfire so concentrated.

on the ground. Thus the R.A.F. were driven from their last operational base in Burma. Stevenson withdrew Akwing to Chittagong, in India, the poorer by 20 precious aircraft. Akyab was maintained as a refuelling base, particularly to permit the reconnaissance Hudsons to keep the enemy's activity in the Andaman Islands area under observation.

Since there were now no longer any main operational bases in Burma and the needs in north-east India and Ceylon were extremely pressing, Burwing was not re-equipped as such, though its units continued to harass the enemy to the extent of their capacity. Blenheims were sent to Lashio and Loiwing to operate for a few days and return to Calcutta and in the meantime (on 6th April) eight Hurricanes had been moved to Loiwing. It was a very sobering thought that, while General Alexander's forces and the Chinese Army in the east must still be served by the maximum air effort possible, a new phase of air operations was being planned in which India was the Allied stronghold.

Meanwhile the end was near in the Philippines. In the first four months of 1942 American heavy bombers based in Java or Australia made a few raids to those islands. On 19th January nine Flying Fortresses of No. 7 Bombardment Group based at Malang in eastern Java had flown to Del Monte with the objects of bombing targets on the way there and back, taking some ammunition into Mindanao, and bringing home some men of the veteran No. 19 Group. Three crews turned back but the remainder arrived safely at Del Monte and then brought back to Malang 23 of the group's officers.

It was then evident that the only help that could be given to the forces on Bataan and in the southern islands of the archipelago would be provided by occasional visits by heavy bombers, or by blockade-running vessels or submarines. However, of about 18 ships that tried to reach the Philippines only three got through. The only fighter aircraft to reach Luzon were three Kittyhawks, shipped from Australia to Mindanao in crates and assembled there early in March. On Bataan the American air force therefore mainly comprised what remained of No. 24 Pursuit Group—15 pilots and fewer planes. As the aircraft were shot down or worn out the pilots and ground staff were transferred to the infantry. The fighters made some successful attacks on Japanese ships and airfields, carried supplies and passengers from Mindanao to Bataan, and dropped supplies to isolated units.

In January and February General MacArthur was still hoping to build up strong forces in Mindanao and to that end ordered the construction of airfields on it and other islands. By 1st March there were 16 all-weather fields large enough to take any aircraft on Mindanao, Negros, Cebu, Panay and Bohol.

CHAPTER 22

LOSS OF TIMOR AND JAVA

GENERAL WAVELL had told all the forces under his command very clearly that air operations had been "the governing factor" in the enemy's advances, that they were "likely to continue to be of the greatest importance to both sides" and that, at this stage, considerable air losses would have to be faced.[1] With this knowledge strenuous efforts were made to improve facilities at Penfui aerodrome on Timor. Aircraft dispersal bays were constructed and, using coral hand-packed by native labour, the runway was extended. An emergency landing ground had been prepared at Mina River, about 40 miles from Koepang and a satellite airstrip was being constructed about seven miles north-west of Penfui.

No. 2 Squadron at this time had aircraft at Darwin, where all major maintenance and repair work had to be done, at the Penfui base, and at the advanced operational base at Namlea, where one flight was operating under the control of A.C.H. Halong and in conjunction with No. 13 Squadron. The squadron's first loss was severe. On 20th January a Hudson, heavily laden with stores and men for Namlea, stalled on take-off from Penfui and crashed. The pilot, Flight Lieutenant Cuming, and nine others in the aircraft, including a party of ground staff for the advanced base, were all killed.

Living and working conditions at Penfui were extremely difficult. Little fresh food was available and the men suffered so much from dengue, malaria, dysentery and tropical sores that up to 30 per cent of them were listed for sick parade daily. On 25th January an American Kittyhawk pilot, on his way to Java, unsuccessfully attempted to intercept an enemy reconnaissance aircraft and, since warning facilities were lacking and there was every indication that Penfui would be raided by Japanese air units, the Hudsons were moved to Mina River where they could be camouflaged effectively in the adjacent jungle. Next day, without warning, seven enemy fighters made a low-level attack on Penfui aerodrome. A Dutch amphibian aircraft on a local flight was shot down in flames, and a Dutch Dragon Rapide was also destroyed, and its pilot, who was a woman, and five passengers were all killed. An American Kittyhawk was wrecked on the ground and the station hangar, operations room and barracks were strafed. The raiders also intercepted a R.A.A.F. Dakota, captained by Flying Officer Webster[2] with Sergeant Van-Praag[3] as second pilot, which was returning to Penfui after having flown a radio party to Surabaya, and shot it down over the Sumba Strait. The crew of four, after 30 hours in the water during which they had to beat off attacks

[1] General directive issued from ABDA Command, 20th January 1942.

[2] Sqn Ldr N. W. Webster, GM, 270847. 30 and 36 Sqns; comd 35 Sqn 1945. Department store manager; of Toowong, Qld; b. Brisbane, 17 Aug 1919.

[3] F-Lt L. M. Van-Praag, GM, 60431. 36, 35 and 38 Sqns; comd 1 Paratroop Training Unit 1944. Professional motor cyclist; of Bondi, NSW; b. Sydney, 17 Dec 1908.

by sharks, managed to reach Sumba Island, 25 miles away. There they were cared for by friendly islanders and taken to the Dutch authorities who gave them medical attention for wounds and exposure, and arranged for their transport to Waingapu, whence they were flown to Darwin in a Hudson aircraft on 12th February.

A plan to build up the fuel supplies at Mina River landing ground by sea delivery was tried out when, on 27th January, the American destroyer *Peary* hove to off shore with a consignment of petrol in drums. A party under Flying Officer Cole,[4] the equipment officer of No. 2 Squadron, cut a track from Mina River to the beach through swamps, grass eight feet high, and finally dense jungle. Meanwhile the Hudson that had flown them to the landing ground was attacked on the ground by Zeros and destroyed. Drums of fuel were sent ashore in one of the *Peary*'s lifeboats but it was caught in the heavy surf and washed ashore. Sixteen seamen then swam off with drums lashed together to form a raft, but were carried about five miles up the coast by the current. Eventually, after intense labour and many difficulties, the fuel was delivered to the landing ground but the task had taken more than a fortnight.

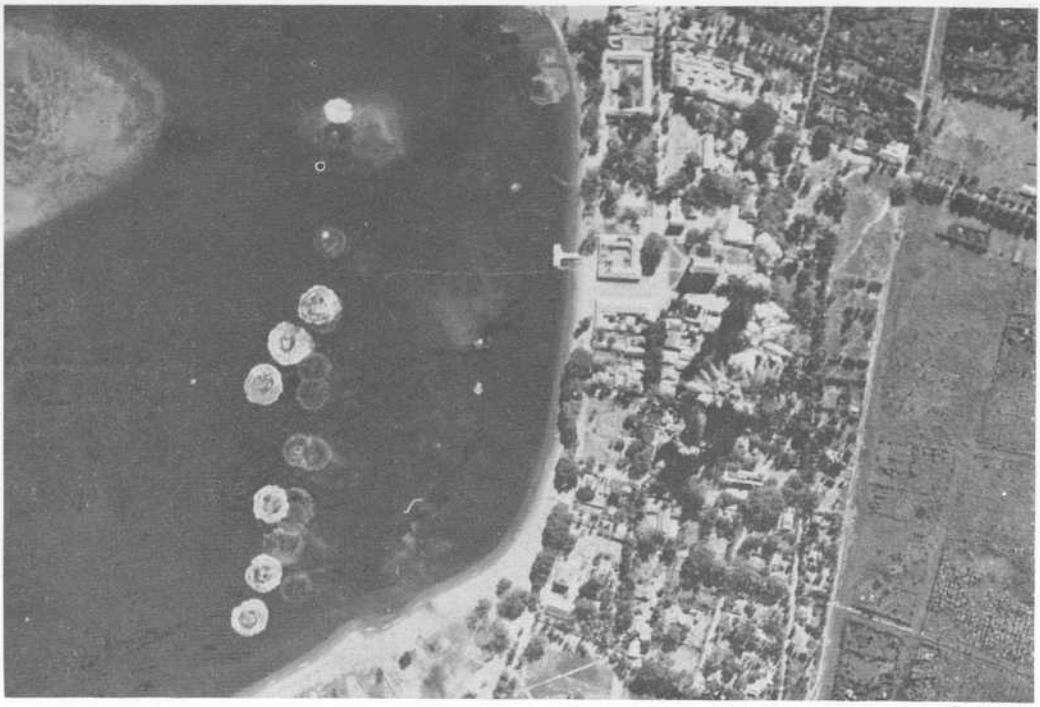
On 30th January (the same day that the Japanese invaded Ambon) enemy fighters again raided Penfui, destroying a Hudson that was taxiing to a revetment and wounding the pilot. Off the coast they intercepted and shot down the Qantas Empire flying-boat *Corio* which was on a flight to Surabaya to evacuate women and children refugees. Easy prey, the heavy flying-boat plunged into the sea with two of its engines on fire. Of eighteen on board only five survived after swimming about five miles to the shore.[5]

Koepang and Dili were now eliminated as stopping points for the regular Qantas flying-boat service to Singapore—a service to which the crews had been making a magnificent contribution by transporting mails, supplies and servicemen and by evacuating men, women and children from danger points throughout South-East Asia. So consistently did the enemy raid the aerodrome that, even for combat aircraft, Penfui was safe only under cover of night. Yet the Hudsons of both Nos. 2 and 13 Squadrons maintained their regular reconnaissance patrols to within 50 miles of Kendari twice a day. One crew would take off from Penfui at dawn, complete their patrol and land at Darwin; another crew, reversing the procedure, would fly from Darwin, cover the patrol route and land at Penfui at dusk.

But by mid-February the aircraft of the two Hudson squadrons were all operating from Darwin under the direction of Squadron Leader Ryland, commanding officer of No. 13 Squadron, while Wing Commander Headlam remained in command of the Penfui base. Without opposition,

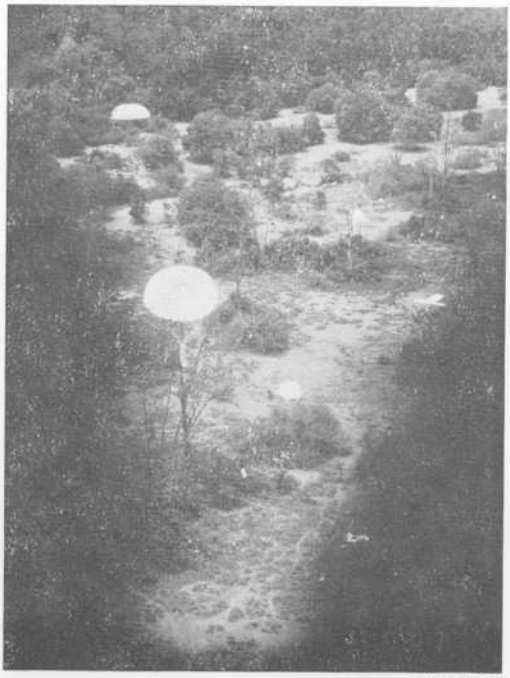
[4] Sqn Ldr A. F. Cole, MBE, 261733. 2 Sqn; CEO 4 AD 1943; EO Western Area HQ 1944; CEO 1 AD 1944-45. Company manager; of Church Point, NSW; b. Glastonbury, Somerset, Eng, 26 Aug 1906.

[5] The survivors included the pilot, Captain A. A. Koch, who had one leg broken and a deeply gashed arm, First Officer V. Lyne, and three passengers. After enduring great hardship they were rescued by a Dutch flying-boat.



(R.A.A.F.)

A harassing attack on Dili in Portuguese Timor on 2nd November 1942 by Hudsons of No. 2 Squadron.



(R.A.A.F.)

A supply drop by No. 13 Squadron to an Allied Intelligence Bureau party at the Dilor River in Portuguese Timor on 7th March 1943. Four of the six packages can be seen near the ground signal T which indicated the dropping point and the *bona fides* of the ground party.



(*R.A.A.F.*)

Hudsons of No. 13 Squadron withdrawing after bombing a Japanese post at Mindelo, in mountainous country in central Portuguese Timor, on 17th December 1942.



(*R.A.A.F.*)

Ground crew of No. 2 Squadron bombing up a Hudson at Batchelor in February 1943. Left to right they are: L.A.C's J. W. Parker, S. Freeman, N. B. Taylor, R. W. Howard, N. S. Harvey and Corporal A. Strale. (Note Parker's camouflaged pith helmet—*not* R.A.A.F. issue—and the jaunty feather stuck in it.)



(*R.A.A.F.*)

Bombs straddling a Japanese cruiser at Ambon on 21st January 1943. The photograph was taken by No. 1 Photographic Reconnaissance Unit at 7,500 feet.



(R.A.A.F.)

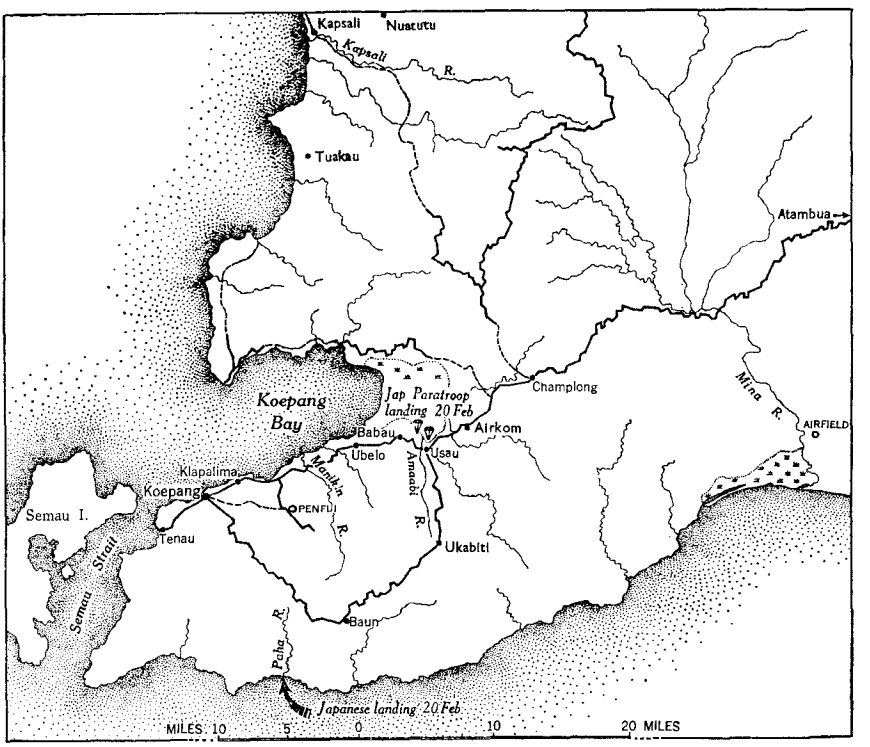
A Japanese transport in Dili Harbour, 18th February 1943.



(R.A.A.F.)

Betty bombers on Penfui airfield under strafing attack by Beaufighters of No. 31 Squadron on 27th February 1943. Eight fighters and four bombers were destroyed and nine fighters and one bomber damaged. Only three Zeros intercepted the Beaufighters, inflicting minor damage on two of them.

the enemy air units maintained the intensity of their air raids which varied from attacks by about 6 fighters to heavy assaults by 18 to 36 bombers, these being concentrated, significantly, on Koepang—the harbour, fixed defences and shore installations; apparently the enemy wanted to avoid harming the aerodrome. Despite all these raids the damage was comparatively slight and there were no R.A.A.F. casualties on the ground.



Like all other garrisons at advanced positions those on Timor were desperately in need of reinforcement. At Penfui they had watched the Kittyhawks of the U.S.A.A.F's No. 20 Fighter Squadron, one of five provisional fighter units hurriedly formed in Australia, stage through on their way to Java on 4th February.[6] Again on the 9th they took further interest in the transit of American aircraft to Java—unwittingly a much too practical interest, for R.A.A.F. ground staff, with no knowledge that they were due, mistook three Douglas Dauntless dive bombers for enemy aircraft, and fired on them with small arms, so damaging two that they had to return to Darwin for repairs. A flight of nine Kittyhawks of No. 3

[6] At Bali these aircraft were forced into combat with enemy fighters, which outnumbered them by two to one, and lost eight of their planes.—Craven and Cate, *The Army Air Forces in World War II*, Vol I, pp. 386-7.

Fighter Squadron accompanied the dive bombers, with a single Liberator to aid them in navigation. As they approached Timor their way was barred by heavy storm clouds and the pilots could not find Penfui aerodrome. Unable to aid the fighter pilots further, the crew of the Liberator was forced to turn back to Darwin—a flight for which their aircraft alone had the needed range. After further vain attempts to land all the Kittyhawks were lost; one pilot was killed when he attempted a crash landing in the jungle and all the others baled out over the Atambua area and were brought in by a R.A.A.F. salvage party. The weather, always likely to be costly, was particularly bad at this period. On the 14th a Hudson of No. 13 Squadron took off from Penfui at dawn into a stormy sky and, while still near the aerodrome, crashed after being struck by lightning. The pilot, Flying Officer Mitchell,[7] and all the crew were killed.

ABDA Command was only too well aware at this time of the tenseness of the situation on Timor and, though General Wavell was reluctant to lessen the reinforcements coming to Java, he decided that Timor must have substantial aid. Four transports carrying the 2/4th Pioneer Battalion A.I.F., a battalion of the 148th U.S. Field Artillery Regiment, a troop of Australian anti-tank guns, and small detachments of specialists put to sea from Darwin on 15th February. The American cruiser *Houston* (with one of her three turrets out of action), the American destroyer *Peary,* and the Australian sloops *Swan* and *Warrego* formed the escort. There was no adequate air cover available, and one of the only two American Kittyhawks then available at Darwin was sent up on patrol.[8] When the convoy was about 100 miles north-west of Darwin the captain of the *Houston* sent a radio message to the operations room at Darwin reporting that the convoy was being shadowed by an enemy flying-boat. The station commander, Wing Commander Griffith,[9] sent out one of the two Kittyhawks to try to intercept the flying-boat. It did not return. The second Kittyhawk then went out but its pilot failed to find either the enemy aircraft or the convoy.

Unknown to the R.A.A.F. at Darwin, ABDA Command had ordered the diversion of 15 Kittyhawks then being flown from Brisbane to Perth for shipment to Burma in the American seaplane tender *Langley.* These aircraft, which had reached Port Pirie, South Australia, were there sent north to Darwin whence they were to provide fighter protection for the convoy and then go on to Java. Griffith had just signalled to the *Houston* that no other fighters were available when 10 of these Kittyhawks—5 had been lost on the way from Port Pirie—landed at Darwin. Major Floyd Pell, commander of one of five recently formed American provisional fighter squadrons (No. 33), who was then at Darwin, undertook that 6

[7] F-O G. G. Mitchell, 290664. 14 and 13 Sqns. Clerk; of Rivervale, WA; b. Sydney, 10 Jun 1921. Killed in aircraft accident 14 Feb 1942.

[8] Under authority from ABDA Command ACH Darwin had operational control of American aircraft at that base as from 7th February.

[9] Gp Capt S. de B. Griffith, AFC, 260096. Comd RAAF Stn Darwin and 7 Sqn 1942; SASO and SMSO 5 Maintenance Gp 1942-43; comd 1 AD 1943-45. Engineer; of Sydney; b. Manly, NSW, 15 Aug 1905.

of the newly arrived fighters should go to the convoy's aid. They found the convoy steaming in formation towards Timor, but there was no sign of any enemy aircraft so they returned to Darwin. Next morning, as was feared, enemy aircraft—35 enemy bombers and 9 flying-boats—attacked the convoy. The escort ships, and particularly the *Houston* which, according to one army officer who watched the fight from one of the transports, "spun on her heel, every gun blazing", gave such spirited defence that the bombers were kept at high altitude, and when the attack ended none of the ships had received a direct hit. Some of the transports had suffered from near misses, and the risk of continuing to Timor was considered too great. Under orders from ABDA Command, the convoy turned and steamed back to Darwin.

Japanese air reconnaissance of Timor had now increased and was almost unhindered; some of the aircraft dropped leaflets exhorting the natives not to aid the Dutch and threatening any who assisted in demolition work. It was clear that the island was soon to be invaded, and on the 18th Headlam received orders to evacuate all the R.A.A.F. staff except small maintenance and signals parties. Every man volunteered to remain. Six officers and 23 other ranks were selected, including Flying Officer Cole and his party who were absent salvaging what they could from the crashed American Kittyhawks. At dusk that day 6 Hudsons arrived to take the main staff to Darwin. On their way 4 of them, led by Ryland, attacked an enemy submarine. Since they carried no bombs they dived to as low as 10 feet over the water to fire their guns, but without success. At 3.30 a.m. on the 19th the Hudsons left again for Darwin carrying all but the selected rear party which, in company with members of Sparrow Force, began the pre-arranged demolitions and the mining of the aerodrome.

At 6 p.m. that day the garrison at Koepang received a report that an enemy convoy was approaching through Semau Strait. Flight Lieutenant Rofe,[1] in charge of the R.A.A.F. rear party at Penfui after Wing Commander Headlam had been recalled to Darwin, recorded later that even emergency radio messages to Darwin went unanswered. As he had two portable transmitters he divided his party and, after arranging for a rendezvous on the south coast in a month's time, sent 3 officers and 13 men to Babau with one of the transmitters. That night news came that the enemy were landing on the south coast near Koepang and at Dili. At 5 a.m. on the 20th, Japanese warships began shelling the aerodrome. The bomb dumps were then demolished. These explosions and the enemy shelling made further radio transmission from the aerodrome impossible so Rofe set out with his party for Babau. As they were approaching they saw waves of enemy aircraft, flying low, drop several hundred paratroops. Rofe therefore took his party to Champlong where Sparrow Force

[1] Sqn Ldr B. Rofe, MBE, 282539. Directorate of Meteorological Services RAAF 1941-46. Of Norwood, SA; b. 14 Sep 1917.

had their headquarters and there reported to Brigadier Veale,[2] the force commander, who agreed that the R.A.A.F. party should move into the hills, set up their transmitter, and keep him informed of any messages from Darwin. Cole and his party, who had returned after the main party had been evacuated, joined Rofe's party at Champlong and moved with it into the hills overlooking Koepang Harbour.

Meanwhile it had been planned to send two Hudsons to Koepang on the 20th to evacuate the R.A.A.F. rear parties. Two aircraft did approach Timor, but as they did they saw the Japanese landing operations in progress; one of the pilots, Flight Lieutenant Dunne, reported later that he found his aircraft flying over an enemy aircraft carrier. As the occupation of Koepang by the Japanese appeared to be beyond question, the Hudsons returned to Darwin. Other Hudson crews had earlier made reconnaissance flights over Timor, returning to report simultaneous enemy landings at Koepang—where 16 warships were sighted in the harbour—and at Dili.

Rofe then moved the two parties totalling 29 men to Nuatutu which was reached on 25th February after great hardship, burdened as the men were with the vital but cumbersome wireless equipment, and handicapped both by the rough mountainous terrain and their own physical debility, resulting from malaria and tropical ulcers. A rendezvous had been arranged for them at Kapsali on 1st March, but the flying-boat that was to meet them failed to appear. Attempts were then made to drop supplies to the stranded party between 2nd and 7th March, but parachutes were lost in the shoulder-high scrub, and one which was found contained only wireless batteries that had been broken on impact. Further unsuccessful drops were attempted on the 12th and 13th. North-Western Area Headquarters then instructed Rofe to find an emergency landing ground, and one was found on a 3,000 by 200 yards stretch of hard beach at Tuakau, 15 miles away. The party, in a very weak condition, moved to the neighbourhood, but North-Western Area Headquarters at the time considered the risk of landing and taking off from this ground under overloaded conditions too great, so this plan of rescue was abandoned.

During this time four men had died. On 10th April islanders brought news that a party of 300 Japanese were searching the area and were only nine miles away near Kapsali and headed in their direction. This was signalled to Darwin and a move made back into the hills. On the 15th Darwin informed the men of arrangements for their rescue by the United States submarine *Searaven*. They were instructed to light a signal fire on the beach on the 17th when the submarine would take them off. Under hazard both from Japanese patrol vessels and the difficulties of negotiating a dangerous surf, this was done on the nights of 17th and 18th April and they were returned to Fremantle on the 26th.

[2] Brig W. C. D. Veale, MC, DCM, ED. (1st AIF: Lt 5 Fd Coy Engrs.) Comd 2/3 Pnr Bn 1940-41; CE 7 MD 1941-42; comd Sparrow Force 1942; CE Second Army 1944-45, First Army 1945. Civil engineer; of Glen Osmond, SA; b. Bendigo, Vic, 16 May 1895.

The paratroops that Rofe and his party had seen descending had been dropped from between 20 and 25 aircraft which came over in three groups flying in arrow formations. The drop was made in calm weather with bright sunshine from about 400 feet. Among the white parachutes were occasional red or blue ones, denoting (it was learned later) platoon and section leaders respectively. As they landed the paratroops made much noise, firing automatic weapons and shouting, "You are my prisoner, Australian!" As they assembled under their leaders they took up ambush positions or climbed trees and began sniping. When platoons moved forward they put up Japanese flags to indicate their positions to their own aircraft.[3]

For the invasion of Timor the Japanese had planned simultaneous assaults on Koepang and Dili. The *228th Regiment,* the force that had captured Ambon, was assigned the task of taking both bases, but for the attack on Koepang they had the aid of paratroops from *3rd Yokosuka Special Naval Landing Force.* Nine transports escorted by a light cruiser and ten destroyers left Ambon on 17th February. Six of them had been detailed for the invasion of Koepang while the other three were to be diverted for the attack on Dili. The whole convoy moved south under cover provided by two heavy cruisers, four destroyers, and the seaplane tender *Mizuho.* There was no interception by any Allied forces on the way and the two echelons made their way uninterrupted to their respective anchorages, reaching them late on the night of the 19th.

At Dili, against only slight opposition, the main body of troops had landed by dawn. In the Koepang area the landing was achieved on the south coast and the troops immediately pressed inland towards Penfui aerodrome. Early next morning troop carriers took off from Kendari with 308 paratroops who were dropped in an area to the north-east of Koepang. A second drop of 323 paratroopers of the same force was made on the morning of the 21st. So reinforced the airborne element of the invasion reached the aerodrome where they made their first contact with the seaborne troops. Meanwhile at Dili the landing had been completed and the aerodrome was in Japanese hands by the 20th. With both air bases under their control the supporting air units immediately occupied them and operational responsibility for the Timor area was promptly allotted to *21st Air Flotilla* which already was held responsible for the Menado, Kendari and Ambon areas.

By early February Darwin's security as an operational base was gravely in question. Although the port had come specifically within Wavell's command as the principal naval and supply base for the eastern ABDA Area, American naval vessels, including depot ships, were now being transferred to Tjilatjap in Java. This reflection of apprehension extended to high places in both Washington and Canberra. The Chief of the United States Naval Staff, Admiral King, surveying this phase of the war, wrote later that at this time "Darwin, not entirely suitable from the beginning, was becoming untenable".[4] More than a month earlier the probability of Darwin being attacked was implicit in the Australian War Cabinet's decision which resulted in the evacuation of most of the women, children, aged people and invalids from the town.

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[3] Each paratrooper carried rations for three days, a light automatic weapon, pistol, binoculars and 6 hand grenades. Heavier equipment such as mortars was dropped by separate parachutes.

[4] Admiral E. J. King, *First Official Report to the Secretary of the Navy* (1944), p. 43.

There were, of course, convincing reasons for these fears. The year was now little more than six weeks old but within those weeks Japanese submarines had been active in the area—one had been sunk only 50 miles from Darwin;[5] several Allied ships had been bombed; extensive enemy aircraft activity over Timor on 8th February had caused a raid warning in Darwin that lasted 90 minutes; and Japanese reconnaissance aircraft had been over Darwin at least four times in the period, the latest on the 18th. Linked with and more important than these incidents was the fact that with Ambon already in enemy hands there was no longer any doubt that Timor would be lost (its fall, in fact, was only 48 hours off). Whatever the prospects of the actual invasion of the Darwin area might be, the factor most disturbing the minds of the Allied commanders was the unquestionable superiority of Japanese air strength with their land and carrier-based forces coordinated and already used with (to the Allies) staggering efficiency.

On the 19th February there were 47 naval and merchant vessels in port, ranging from a 12,000-ton transport to a 12-ton patrol boat.[6] Darwin's anti-aircraft defences consisted of 18 guns (16 3.7-inch and two 3-inch), with supporting searchlight batteries, and numerous machine-gun posts set up around the gun positions, the oil tanks and Service camps and dumps.[7] Army headquarters and a battalion of infantry together with the artillery—coastal, anti-aircraft and a field regiment—were in or near the town, while the main army force of two brigades with supporting arms was dispersed in camps to the south over a distance of between 30 and 40 miles.

When the Ambon bases were evacuated Area Combined Headquarters Darwin was transferred to ABDA Command. These headquarters, together with North-Western Area Headquarters and station headquarters, were all at the R.A.A.F. Station, Darwin, so close, in fact, as to embarrass the normal chain of command. A.C.H. decided the nature of the operational sorties, passing on the instructions to the station operations room which planned the details and gave the orders to the squadrons. Wing Commander Griffith had been appointed to the command on 1st February and so had had little more than a fortnight in which to assess his new task. In that time he had prepared an amended defence plan for the station which had received the approval of area headquarters. The air officer commanding, Air Commodore Wilson, was at this time absent from Darwin on an official visit to ABDA Command Headquarters to

[5] Four Allied ships shared credit for this sinking, but pride of place was given to the Australian corvette *Deloraine*.

[6] Two belonged to the American Fleet—the destroyer *Peary*, and the seaplane tender *William B. Preston* which serviced the Catalinas of the U.S. Navy Patrol Wing 10 then on the harbour. The Royal Australian Navy had 32 vessels in port—2 sloops, 5 corvettes, a base repair ship and a variety of auxiliary and boom defence craft. Of 11 merchant ships 4 had formed the *Houston* Timor convoy—3 American ships, *Meigs*, *Mauna Loa* and *Portmar*, and the Australian motor vessel *Tulagi*.

[7] Reviewing Darwin's anti-aircraft defences on 15th December the Chiefs of Staff agreed that these were relatively strong by comparison with those in other parts of Australia and that, while some increase was desirable, it could be achieved only "at the expense of the vital area in New South Wales".

confer with General Brett, and Group Captain Scherger was acting air officer commanding. Partly for security and partly because of congestion, certain aircraft and units had been dispersed from the Darwin station to other aerodromes in the area early in February. Air raid practices were held at the Darwin station, but for anti-aircraft defences there were only 10 twin-Vickers machine-guns, and 12 .5-inch anti-aircraft guns obtained from the United States Army. These, with a few Lewis guns, 63 rifles and 257 revolvers, made up the sum of the station's armament. There were no anti-aircraft weapons at Batchelor, Daly Waters, the civil aerodrome or the other advanced operational bases. The R.A.A.F. had 2,000 officers and other ranks in the area. So far as arms permitted, rifle squads were formed and some skirmishing and bushmanship was practised, but, with most of the men unarmed, comparatively few of them could be given anything approaching adequate ground combat training. Even so it was intended that the air force ground units should fight with the army as infantry if no aircraft were left for them to service. Evacuation of civilians could be ordered only after the Australian Government had declared a state of emergency, except in extreme danger, when the order might be given on the authority of the Darwin Defence Committee, which consisted of representatives of the three armed Services and the civil administration.

North-Western Area's strength in aircraft on 19th February included 17 Hudsons of Nos. 2 and 13 Squadrons, 14 Wirraways of No. 12 Squadron (then engaged in short-range seaward reconnaissance), and 10 U.S.A.A.F. Kittyhawks then in transit to Java. These aircraft were disposed at the various aerodromes thus:

R.A.A.F. Station Darwin—9 Hudsons (including 6 that had arrived that morning from Koepang); 10 Kittyhawks. *Civil Aerodrome*—5 Wirraways (unserviceable).
Batchelor—9 Wirraways.
Daly Waters—8 Hudsons (no crews).

Other aircraft were: a U.S.A.A.F. Liberator at R.A.A.F. Station, Darwin (in transit), one Fairey Battle and three Moth Minors at the civil aerodrome, two American Beechcraft transports at Darwin aerodrome and one at Bathurst Island.

Early on the 19th the six Hudsons arrived carrying the base staff from Penfui. The operations room had been advised that Major Pell intended to lead his 10 Kittyhawks off at dawn for Koepang on their way to Java, but mechanical trouble delayed take-off and it was not until 9.15 a.m. that they set course with a Flying Fortress for navigation escort. A short time later, however, Darwin operations room passed a report received from Koepang of bad weather ahead, and Pell, extremely conscious of his pilots' lack of operational experience, decided to turn back. Arriving over the Darwin base again about 9.40 a.m. he ordered five of the force, including Lieutenant R. G. Oestreicher, his one experienced pilot, to patrol over the harbour while he led the other four down for refuelling. Five minutes later, while the patrol aircraft were at 8,000

feet and climbing to their allotted altitude of 15,000 feet, Oestreicher, looking up, saw fighters diving on them. He shouted "Zeros, Zeros" into the mouthpiece of his radio-telephone and dived away, dropping his belly tanks as he went.[8] The other Kittyhawk pilots followed his example, but, having the advantage of surprise and altitude, the Zeros quickly disposed of four of them. In their very brief combat two American pilots were killed when they were shot down into the sea, another had to bale out over the sea, and the other though wounded managed to bring his disabled aircraft in and make a crash landing on the aerodrome. Oestreicher fought his way out and found temporary cloud cover after shooting down one Zero.

Meanwhile in the R.A.A.F. operations room a message was received from A.C.H. stating that a large number of aircraft had crossed Bathurst Island, flying south towards Darwin.[9] The station commander received this message, which had come from the Bathurst Island mission station through the Amalgamated Wireless radio-telephone link, at 9.37 a.m. There was some discussion in the operations room about the possibility that the approaching aircraft might be Major Pell's squadron returning off track. Griffith did not think so, though it was not uncommon for fighter formations to lose their bearings, but it *was* possible that a formation of American aircraft was arriving without notice, another not unusual occurrence. He was conscious of the need to avoid false alarms which seriously affected morale and two of which had been given within the last six weeks.[1] At 9.45 a.m. navy headquarters also had a report of a large formation of aircraft approaching, and at the same time Major Hone[2] of the 2/14th Field Regiment encamped at Night Cliffs, about seven miles north of Darwin, informed the R.A.A.F. that he had seen a Kittyhawk plunge into the sea and a parachute open out far above. The recipient of his message said he knew nothing of any raid. Hone, at 9.50 a.m., gave army headquarters their first warning that Darwin was about to be raided. Some airmen at the Darwin station saw aircraft in a dog-fight over the harbour but accepted it as a training exercise. Then, at 9.57 a.m., the auxiliary minesweeper H.M.A.S. *Gunbar* was attacked by nine Zeros as she was passing through the harbour boom gate. Griffith ordered the alarm and the sirens sounded out over the port at 9.58 a.m.[3] Almost simultaneously 27 enemy bombers were seen approaching from the south-east. They were flying at 14,000 feet in impeccable formation, creating the impression among some townspeople that American aircraft were arriving. The happy illusion was shattered by

[8] Edmonds, *They Fought with What They Had,* p. 354.

[9] Soon afterwards the radio link was "jammed" and after an interval, six Japanese fighters strafed the radio station on the island and destroyed the Beechcraft transport on the ground there.

[1] One of these was on 5th January when an Allied convoy, diverted on a voyage to the Philippines, arrived off Darwin from Brisbane without warning and the second was on 15th February, when the American Kittyhawks flew in from Port Pirie unannounced.

[2] Lt-Col R. B. Hone, ED, VX38996. Comd 2/14 Fd Regt 1942-45. Manager; of Adelaide; b. Morphett Vale, SA, 22 Aug 1909.

[3] Because time-keeping at the various headquarters was not synchronised the times given here for the receipt of the various messages cannot be precisely compared.

the concussion of gunfire as the army's heavy anti-aircraft guns went into action and the deeper reverberations as bursting bombs flung up columns of water in the harbour.

Having pattern-bombed the ships the Japanese aircraft, maintaining formation, circled and, still at high altitude, swung in for a second assault, the line of bomb explosions now moving from the shore directly across the town. Then, as the high-level bombers completed their run, dive bombers and fighters swept in over the harbour picking individual targets. The scene was one of frantic endeavour by the ships' crews to evade the attackers and to fight back. Since they had maintained steam the American ships *Peary* and *William B. Preston* were promptly under way but the dive bombers scored two direct hits on *Peary* and one and a near miss on the tender. The chief officer of the hospital ship *Manunda,* who watched the scene from the ship's bridge, later described the tender as "dashing across our bows, missing us by inches and steering with her engines". *Peary,* he said, was "a solid mass of flames with burning oil around her and what was left of the crew jumping into the burning oil". The anti-aircraft gunners in both ships were in continuous action, the forward guns of the destroyer maintaining their fire when the ship's stern was under water. While boat crews from the *Manunda* were valiantly striving to rescue seamen from the flame- and oil-covered water, their own ship received a direct hit forward of the bridge which started fires. The corvette *Katoomba,* in dry dock, put up such an effective barrage of anti-aircraft fire that an attacking bomber pilot missed his target. The freighter *Barossa,* laden with a cargo of wooden piles which was on fire, and the motor vessel *Neptuna,* which had 200 depth-charges in her holds and was also on fire from a direct hit, were berthed on either side of the wharf. Meanwhile the transport *Meigs,* the largest ship in the harbour, had been hit several times by bombs and was on fire, and the *Mauna Loa,* also on fire, was settling in the water after receiving two bombs through an open hatch. *Portmar,* holed by a near miss, was making for the shore. The *Zealandia* was on fire from a direct hit, and the tanker *British Motorist,* hit by a heavy bomb, was low in the water.

Two Catalina flying-boats were destroyed on the water, but the Qantas Empire flying-boat *Camilla,* which had arrived the night before and was moored near the wharf, was unharmed but for two small shrapnel holes, probably because she was concealed beneath smoke from the burning ships. As she was close to the burning *Neptuna,* which might explode at any minute, the aircraft was flown to Groote Eylandt.[4]

Early in the attack a heavy bomb hit the shore end of the wharf just as waterside workers had gathered for their 10 o'clock "smoke-oh". The bomb killed 21, hurled a railway engine into the sea and blasted away a span of the wharf, cutting off the surviving workers from the shore. Along with the crews of many other small craft, who were performing

[4] Two Qantas pilots, Capts W. H. Crowther and H. B. Hussey, took the aircraft off without other crew. Having saved the flying-boat they returned next day to remove the company's staff.

magnificent rescue work on the harbour, the crew of the Civil Aviation Department's launch plied to and fro bringing in wounded and stranded men from the wrecked wharf.

Fifteen large bombs were dropped on the town, completely demolishing the Administrator's office, the police barracks and attached police station and Government offices. A bomb which fell on the post, telegraph and cable offices and the postmaster's residence killed the postmaster, his wife and daughter and members of the postal staff, including four female telephonists and two postal officers who had sought refuge in a trench. Government House and the civil hospital were both severely damaged by the bomb explosions, and the army hospital at Berrimah, nine miles from the town, was attacked with gunfire.[5]

At the R.A.A.F. aerodrome Major Pell and the four Kittyhawk pilots who had landed with him for refuelling raced to their aircraft, "scrambling" as enemy fighters dived on them. Pell and three others managed to get their aircraft into the air but they had no time to gain combat altitude; and almost immediately the four of them were shot down. Pell, who baled out from 80 feet, landed on the aerodrome, his parachute having scarcely opened by the time he reached the ground, but just as he did so an enemy fighter dived and killed him with a burst of cannon fire. The other three American pilots survived either by parachuting or by crash-landing their aircraft. The fifth pilot was killed by gunfire before his Kittyhawk left the runway. Enemy dive bombers now joined the fighters in the attack on the aerodrome and the destruction continued, the fighters flying so low that men in slit trenches could clearly see the faces of the pilots. Buildings and equipment were blasted with great accuracy. The defenders fought back as best they could with their limited arms. Squadron Leader Swan[6] and Warrant Officer Chapman[7] were in action with a Lewis gun from one trench, supported by a group of riflemen, while Wing Commander Tindal, with a Vickers aircraft-type machine-gun mounted on the top of a trench, kept up a steady fire until he was killed by a cannon shell. His death is believed to be the first fatal R.A.A.F. casualty in actual combat on the Australian mainland. Swan and Chapman led a party which broke open an ammunition store with a pick and carried the ammunition into the open for safety. Another party of four airmen removed an ammunition truck from the equipment store and 50 more manned machine-gun positions throughout the attack. The transport section suffered heavily, four of its members—Leading Aircraftmen Barton[8]

[5] There was no reason to suppose that the attacks on the hospitals were deliberate; even the gunnery attack at Berrimah may have been without design. The early freedom of the hospital ship *Manunda* from attack was probably intentional but damage done to the vessel by one of the last of the dive bombers was undoubtedly deliberate.—Report of the Commission of Inquiry into the Darwin Raids, p. 13.

[6] W Cdr A. D. Swan, MBE. (1915-23: 1 Bn Black Watch 1915-18, Waziristan Field Force North-West Frontier 1919-23.) Comd RAAF Stn Darwin and 52 OBU 1942, RAAF Overseas HQ 1943, 11 PDRC 1943-44, Aircrew Officers' and NCO's Schl 1944-45. Regular air force offr; of Melbourne; b. Perth, Scotland, 19 Nov 1896.

[7] F-Lt H. W. Chapman, 207703. HQ RAAF Stn Darwin; Instr 2 ITS; Adj 41 OBU, 14 W-T Unit, 16 Air Operational Post Flight. Liftman; of Lakemba, NSW; b. Sydney, 9 Jan 1917.

[8] LAC L. A. Barton, 18368; RAAF Stn Darwin. Mechanic and fitter; of Rainbow, Vic; b. Rainbow, 13 Nov 1910. Killed in air raid 19 Feb 1942.

and Latham[9] and Aircraftmen Nealyon[1] and Smith[2]—who were in a trench that received a direct hit, were all killed. All the section's vehicles were either destroyed or damaged.

The enemy formations broke away soon after 10.30 a.m. and the "all clear" sirens sounded 10 minutes later. At the wrecked wharf *Neptuna,* still with her cargo of depth-charges, was so fiercely on fire that nothing could be done to save her. Across the wharf *Barossa* lay with her cargo of wooden piles still burning. Watchers saw the gallant crew of the naval tug *Wato* move in and pull an oil lighter away from *Barossa*'s side and then return to tow the burning freighter away. They had just got their tow clear when *Neptuna* blew up with an explosion that "shook the whole town and blew the ship to pieces. The stern and engines went down alongside the wharf and the bow floated for a few minutes, turned on its side and then sank."[3]

In the town rescue parties were working their hardest while others engaged in the grim task of collecting the dead. At the air force station fire-fighting and salvage work was in progress. This work was expanded when the "all clear" gave men freedom of movement. An hour and a quarter passed and then the depot ship *Platypus* began to sound her siren and, in response to a message from A.C.H., the R.A.A.F. operations room ordered the stipulated alarm—the firing of a red Very light. It was 11.58 a.m. Two formations of enemy bombers were approaching, one from the south-west, the other from the north-east. Their altitude was about 18,000 feet and it soon became apparent that the target for both formations was the R.A.A.F. aerodrome. They appeared almost to cross each other and each laid its pattern so accurately that the aerodrome seemed smothered under the explosions. In about 20 minutes it was over. Men emerged from the trenches dazed by the concussion and shaken by the sight of the station in ruins. In the two raids the station had lost its two hangars which, with the central store, had been burned out, and the transport section and the recreation hut had been wrecked beyond repair. Four blocks of airmen's quarters and the hospital had been severely damaged, and the officers' quarters and mess had been hit.

The station commander summoned Squadron Leader Swan and gave a verbal order that all airmen should move "half a mile down the road and then half a mile inland" where arrangements would be made to feed them. Once the "all clear" had been given most of the airmen moved to their assembly points, but, without officers to interpret it, Griffith's order was given wide and increasingly distorted meaning. Passing from one to another by word of mouth it became garbled until it took the form of

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[9] LAC P. S. Latham, 32932; RAAF Stn Darwin. Farmer; of Baan Baa, NSW; b. Sydney, 22 May 1916. Killed in air raid 19 Feb 1942.

[1] AC1 F. Nealyon, 20361; RAAF Stn Darwin. Chauffeur; of Woollahra, NSW; b. Petersham, NSW, 2 May 1920. Killed in air raid 19 Feb 1942.

[2] AC1 S. G. Smith, 45738; RAAF Stn Darwin. Engine driver; of South Perth, WA; b. Thrapston, Eng, 15 Nov 1913. Killed in air raid 19 Feb 1942.

[3] C. L. A. Abbott, *Australia's Frontier Province* (1950), pp. 82-3.

an order for a general evacuation as quickly as possible. Highly-coloured rumours of an impending Japanese invasion came from the town and spread quickly. Among men unarmed and virtually untrained to use arms, who had just been subjected to their first enemy attack—heavy pattern bombing, which is one of the most demoralising—the result was probably inevitable; many of them streamed off the station and, though some officers succeeded in checking groups at certain points, the situation was soon out of hand.[4]

In the absence of the air officer commanding, Scherger acted quickly and emphatically. When the civil aerodrome was taken over at his orders as a temporary station order began to emerge. While it remained true that many members of the force moved aimlessly south, it was also true that, as Scherger observed later, there were among them excellent non-commissioned officers and many airmen in whose behaviour there was not the least sign of panic and who, anticipating a Japanese landing, declared themselves ready to fight with the army units. The men of the two Hudson squadrons—units already experienced in operations under attack—were very steady, as were members of the equipment branch and the transport section—men who had been very actively engaged in salvage work. At a roll call for the transport section next day there were only four absentees—the men who had been killed when a bomb hit their trench. The forward echelons of the two Hudson units also had a 100 per cent attendance at parades next day. Yet there was a substantial number of men who did not report.

In the town also there was a definite break in morale after the second raid warning. To some observers most of the townspeople seemed convinced that the rapidity with which the second raid followed could have only one meaning—it was a pre-invasion bombardment. This was realistic for it was in keeping with the enemy's invasion tactics. There followed an exodus of civilians using a wide variety of transport. Inevitably the question of responsibility for this aroused bitter criticism and counter criticism and, with the same inevitability, the events of the day provided examples of outstanding courage and arrant selfishness.

The total death roll has been assessed at 238, the figure being subject to several qualifications.[5] Of this total, at least 157 died in ships. Fourteen civilians were killed in the town and 21 on the wharf. The R.A.A.F. and the U.S.A.A.F. each had 7 fatal casualties and the army 2. Apart from 78 people treated for minor injuries, the three hospitals ashore

[4] In evidence before the Commission of Inquiry some of these men remarked that they did not know how to use arms and were not going to be massacred in the event of a Japanese landing.

[5] The fatal casualties in *William B. Preston* are stated only as "several". Three and two deaths respectively are included in the total as from the *Zealandia* and the *British Motorist*, though the Administrator received a report that officers from these ships had said no deaths had occurred in them. An approximate total of 80 is allowed for the destroyer *Peary*'s company though one American historian (Haughland) makes the total only 69 after noting that one officer and 52 other ranks survived and that Jane's *All the World's Fighting Ships 1941* gave the ship's complement as 122.

admitted 148 wounded. To this total must be added those who were taken direct to the *Manunda*.[6]

Five merchant ships were sunk, 3 were beached and one other and the *Manunda* were damaged.[7] Three naval vessels were sunk—U.S.S. *Peary*, the 14-ton Australian lugger *Mavie* and the supply hulk *Kelat*—and eight were damaged. Twenty-three aircraft were destroyed—10 U.S.A.A.F. Kittyhawks, 6 R.A.A.F. Hudsons, 3 U.S.N. Catalinas, one U.S.A.A.F. Liberator and 3 U.S.A.A.F. Beechcraft transports. A Hudson and a Wirraway that was in a hangar for repair were damaged.

As a counter to all these Allied losses it was possible to claim only 5 Japanese aircraft shot down with another 5 probably destroyed, the credit being shared by the American Kittyhawk pilots and the Australian anti-aircraft gunners.[8]

Under cover of night the combined forces of Admirals Nagumo and Kondo—an armada of 4 aircraft carriers, 2 battleships, 5 cruisers and about 20 destroyers—had steamed southward from Staring Bay, the outer harbour of Kendari, on 18th February and entered the Banda Sea.[9] At dawn on the 19th speed was reduced and the 4 carriers altered course to turn into wind while their aircraft crews made final preparations for their greatest assault since Pearl Harbour.

Nagumo's force was at its peak. The four carriers—*Akagi* and *Kaga* (*1st Carrier Division*) and *Hiryu* and *Soryu* (*2nd Division*)—together with the *5th Division* (*Zuikaku* and *Shokaku*) had triumphed at Pearl Harbour. Then, while the *5th Division* sortied to take part in the attack on Wake Island, Nagumo had led the other divisions back to Japan. With the *1st Division* he had set out on 10th January to aid the invasion of Rabaul and Kavieng. While returning to keep a rendezvous at Palau with the *2nd Division*, he had learned of the presence of the American carriers *Enterprise* and *Yorktown* off the Marshall Islands. He therefore turned his ships east to cover the approaches to Truk. But the American carriers themselves turned eastward and so, there being no threat to the much valued island base, Nagumo resumed course for Palau where, later, the two divisions met as planned. The *2nd Division* had in the meantime made a sortie to the south-west to support the invasion of Ambon and returned to Palau. The four carriers then moved as one force to Staring Bay to make ready for their next big task—the raid on Darwin, which was planned to neutralise the Allied air and naval forces as a prohibition against interference with the invasion of Timor.

While the carrier fleet was moving into position the Japanese Navy's *1st Air Attack Force* was also making ready at its base at Kendari. This force, formed at the end of January from the *21st* and *23rd Air Flotillas*, consisted of two groups with 63 Betty bombers between them, and a group of 48 Zeros with an additional

[6] At nightfall, according to one report, the *Manunda* had 76 patients, a total that would include 18 of her own complement. The same authority reports that on the morning of 20th February 19 bodies were taken ashore and that on her passage to Fremantle soon afterwards 15 more were buried at sea.—T. Minto, Truth About Darwin and the Air Raid of 19th February, and Report by OC Troops, Lt-Col J. R. Donaldson, 2/1 Aust Hospital Ship. Since the *Manunda* took on board an additional 190 wounded and sick patients from shore hospitals the calculation becomes complicated.

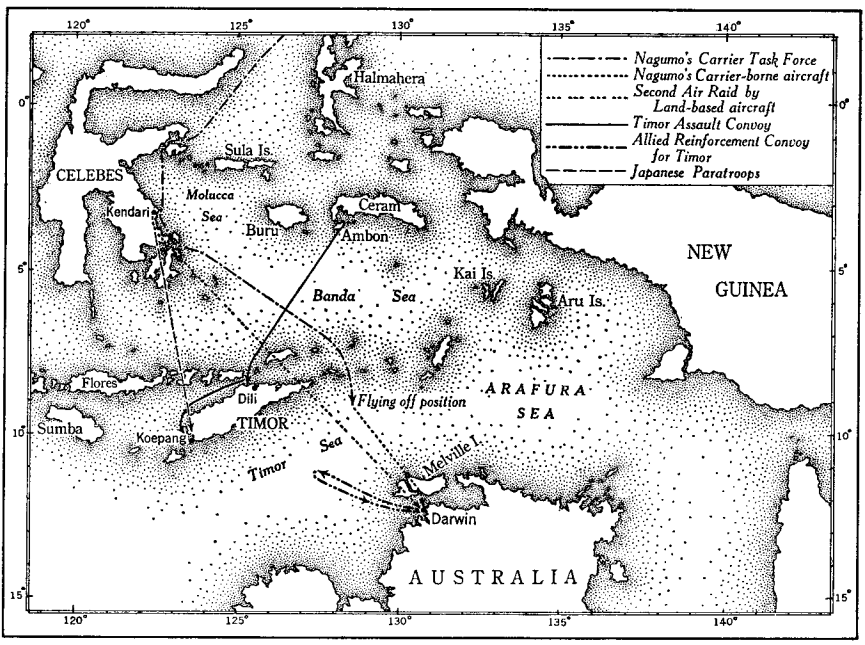
[7] Of the 3 ships beached, one, *Tulagi*, was later refloated and two, *Portmar* and *Barossa*, were salvaged.

[8] Air Commodore Wilson told the Commission of Inquiry that Tokyo Radio had broadcast an announcement that the Japanese had lost 23 planes in the attacks. Mr Justice Lowe's comment was, "I am far from satisfied that the Japanese loss was so high." An American historian records that the Japanese admitted a loss of 15 aircraft.—Vern Haughland, *The AAF Against Japan* (1948), p. 57.

[9] Nagumo's *First Carrier Fleet* at this time consisted of the 4 carriers, 2 heavy cruisers and a flotilla of destroyers. Kondo's *Southern Fleet* was of 2 battleships, 3 heavy cruisers and attendant destroyers.

force of 18 four-engined flying-boats. Aircraft from this force had been very active in the area since formation; their operations included an attack by 36 twin-engined bombers on the American cruisers *Marblehead* and *Houston,* both of which had been seriously damaged, and the blocking of the *Houston* Timor-bound convoy on the 16th by a combined attack by land-based bombers and four-engined flying-boats.

The attack was opened by 27 Kate bombers from the carriers, flying at 14,000 feet and with the wide-swinging tactic used at Pearl Harbour. A second



formation, this time of Val dive bombers, also numbering 27, followed them, together with 3 groups of fighters (Zeros) with 9 aircraft in each group.[1] After an interval of two hours, two formations, each of 27 land-based bombers, the units of *1st Air Attack Force,* flew in to attack Darwin R.A.A.F. aerodrome.[2] For this raid no fighter cover was provided.

The Japanese used a total of 135 aircraft for the two raids—81 from the carriers and 54 from the *1st Attack Force.*

Japanese seaborne activity that pointed to a swift move to invade Bali had been noted about the second week in February by Allied Intelligence and when, on the 18th, an enemy force was reported to be moving south-westward across the Banda Sea, Admiral Doorman's force, which had been separated after the attempt to intercept the Palembang invasion forces, was too far off for immediate interception. That night the enemy

[1] **The Japanese had no popular nomenclature for their aircraft. The names Kate, Val and Zero were among the designations adopted by the Allied forces for simple reference to the various types.**

[2] **The basic Japanese navy-air unit was three 3-aircraft flights and their forces customarily were used in multiples of nine. Most frequently the formations were composed of three such units, or 27 aircraft in all.**

force moved into the Sanur Roads, in Badung Strait, and proceeded to disembark the troops. It was more than 24 hours before Doorman's divided force was able to strike. Two separate attacks were made on the night of the 19th-20th. The first was with the cruisers *De Ruyter* (flying Doorman's flag) and *Java,* with two American destroyers and two Dutch. They encountered a Japanese transport escorted by two destroyers and damaged the transport with gunfire, but the Dutch destroyer was sunk. Three hours later the Dutch cruiser *Tromp,* which had sortied from Surabaya with four American destroyers, met and fought with four enemy destroyers in Lombok Strait. One of the Japanese destroyers was severely damaged and many of her crew killed and *Tromp* was so heavily hit that later she had to move to Australia for repairs. The enemy's much lighter forces thus had the better of these actions and Doorman's force was obliged to return to port having achieved little.

ABDA Headquarters sent Flying Fortresses to attack the enemy ships off Bali. They made 11 sorties and claimed 5 direct hits. Two Dauntless dive bombers of No. 91 Squadron at Malang joined in the fight. Using makeshift bombsights they scored hits on a cruiser and a transport. Later reconnaissance suggested that these vessels had been sunk but the sinkings were never confirmed. Yet this naval and air opposition did not prevent the Japanese from landing, and within 24 hours their fighter aircraft were on Den Pasar aerodrome on Bali, and the last and closest base from which to assail the Allied forces on Java was in their grip.

Meanwhile Kittyhawk pilots of No. 17 Pursuit Squadron had encountered 9 unescorted enemy bombers making a westward sweep. They shot down at least 4 of them and listed the other 5 as "probables". But the 19th was a very costly day for the Allied air forces for, apart from the havoc wrought in the Darwin raids, the Java aerodromes were heavily attacked with the loss of 3 Hudsons and 2 transport aircraft at Buitenzorg, 5 Dutch fighters were shot down over Bandung where Flying Fortresses that had just completed their ferry flights from the United States were destroyed on the ground, and 3 American Kittyhawks of a formation that intercepted an enemy formation approaching Malang were shot down. In return, in this last action, the American pilots shot down 4 of the enemy fighters.

Bali had not been included in the original Japanese invasion plans but the offensive being conducted by their air units from the Celebes and Borneo was being so seriously hindered by bad weather that it was decided to capture Bali and thus gain a base that was not only "next door" to Java but possessed an excellent aerodrome. Two transports left Macassar on 18th February and at dawn on the 19th troops of the *48th Division* began to disembark in the Sanur anchorage on the south coast of the island. There was no land force resistance, and the aerodrome was promptly secured.

Japanese records acknowledge that the Allied air attacks interrupted the landing and that the two transports, *Sasago Maru* and *Sugami Maru,* were both "slightly damaged", one of them receiving a direct bomb hit. In the earlier night naval

action off Bali, the first Japanese ships to engage Doorman's squadron were a section of the *8th Destroyer Division,* a second section of which later made contact with the "enemy" at the eastern end of the strait when the destroyer *Michishio* received a shell hit in the engine-room, was disabled, and had to be towed back to Macassar. Late on the night of the 24th the second echelon of the Bali invasion force, in six transports, reached Sanur anchorage and landed without interruption.

With the capture of Bali the Japanese forces were now ready for the final stage of their assault on the Netherlands East Indies. To meet it, Wavell's most urgent need, as he had emphasised very clearly, was for fighter aircraft. On 19th February he warned the Combined Chiefs of Staff that his fighter force would not remain effective for more than two weeks longer, and two days later he reduced that time estimate—very accurately—to only one week. In a report to the British Government he stated that as soon as there were no more fighter aircraft to support his land and sea forces Java should be evacuated.

At Fremantle the seaplane tender *Langley* was loading a deck cargo of 32 assembled Kittyhawks, while 27 crated Kittyhawks were loaded into the holds of the freighter *Seawitch.* The two ships were under orders to proceed to Burma in convoy with three other supply ships.[3] On 21st February, however, the Combined Chiefs of Staff instructed Wavell that Java should be "defended to the last by all combatant troops then in the island", and added that though land reinforcements were to be "diverted elsewhere" he had their authority to employ any naval or air reinforcements already allotted to the Netherlands East Indies. His immediate reaction to this authority was to order the diversion, direct to Java, of the *Langley* and *Seawitch,* which left Fremantle on the 22nd.

In sending their signal the Combined Chiefs of Staff had clearly acknowledged the hopelessness of Wavell's task. It was not surprising, therefore, that the signal was followed closely by a direction to Wavell that he should withdraw ABDA Headquarters from Java. But the Supreme Commander saw the situation differently. In his opinion the task for which ABDA Command had been created was beyond achievement and, since from now on the fighting from Java would be concerned solely with the defence of the island itself, he believed it could best be continued under the original Dutch command. After conferring with the Governor-General, Jonkheer van Starkenborgh Stachouwer, he recommended to Washington that, instead of being withdrawn, his headquarters should be dissolved. The Combined Chiefs of Staff accepted his advice.

On 25th February "Supreme Commander of ABDA Area and of all armed forces afloat, ashore and in the air, of ABDA Governments" became nothing but a designation in the past tense. Six months later Wavell put his signature to his despatch on the ABDA Command operations. In that despatch he revealed his capacity to withstand the strain

[3] "There was some confusion as to the proper destination of this convoy since, in addition to the NEI and Burma, the defence of Koepang and Darwin was still considered of great importance."—Craven and Cate, Vol I, Note 97, p. 713.

of responsibility for one military disaster after another and still to be able to see clearly the shape of things to come. He wrote:

> It might possibly have been more prudent . . . to let the N.E.I. go and to concentrate on making Burma and Australia secure. But undue prudence has never yet won battles or campaigns or wars . . . that we took the right, the only, decision I have no doubt.

When Wavell resolved that his headquarters should be dissolved and that the command should pass to General ter Poorten, he was well aware that the Dutch commander and his naval colleague, Admiral Helfrich, both disagreed with his own views, and insisted that they should fight to the last. Before he left for India, he instructed the other Allied commanders to fight on so long as resistance continued to be effective and then to leave the island with what troops and equipment they could. The other British and American commanders supported his views without hesitation. His deputy, Brett, had already (on the 18th) advised the War Department that the only chance the Allies now had of countering the Japanese superiority was by undertaking an offensive through Burma and China, adding that Allied strength in Australia should be built up simultaneously. He had sent Colonel Brady, who a month earlier had been commanding the headquarters of Far East Air Force at Darwin, to survey the situation in Burma and, on receiving Brady's report, had decided to "send the mass of all [American] troops to India". On 23rd February, having obtained Wavell's approval, Brett flew to Melbourne while Brereton, and a small staff, left next day for India in two bombers.[4] He had hoped to evacuate all his aircraft, but only a few Flying Fortresses and transport aircraft could be flown out.

With Java virtually under siege and awaiting the final assault, General ter Poorten surveyed his defences. On paper his forces were impressive; in fact, they were depressing. His army comprised his own national troops, including 25,000 regulars; about 3,500 British troops whose significant combat units were one squadron of the 3rd Hussars (25 light tanks) and anti-aircraft units; 3,000 officers and men of the A.I.F., including two experienced battalions—the 2/3rd Machine Gun and 2/2nd Pioneer —which had fought in Syria; and about 500 officers and men of an American battalion of field artillery.

The Allied naval forces, having lost 16 ships, were now reduced to 8 cruisers, 12 destroyers, 32 submarines and some auxiliary craft. But the state of ter Poorten's air forces, on which these other forces must rely initially if they were to have any opportunity for effective combat, revealed the great weakness. The Dutch Air Force had 5 bomber, 3 fighter and 2 reconnaissance squadrons, all seriously combat worn. The R.A.F. and R.A.A.F. units had only 26 bombers, 9 torpedo bombers, 26 reconnaissance and 25 fighter aircraft. Of these about one-third of the bombers

[4] Brett had given Brereton his choice between India and Australia and Brereton chose India. The intention in Washington had been that both Brett and Brereton should go to Australia, to which the War Department gave preference for the development of bases for future operations.—Craven and Cate, Vol I, p. 396.

and reconnaissance aircraft and only 18 of the fighters were operationally serviceable. The U.S.A.A.F. contribution was about 20 Flying Fortresses and 24 Kittyhawks plus a few Dauntless dive bombers, the serviceability rate for all units being low. What made the size of these forces seem so depressing was the known strength and strategic advantage of the enemy. An Allied estimate about this time put the Japanese land forces available for the invasion of Java at "up to six divisions" and their air strength at from 400 to 500 fighters and 300 to 400 bombers, supported by very powerful naval forces.

There was still a chance that more fighter aircraft might arrive in time to give cover to Helfrich's naval force. In obedience to Wavell's orders, the *Langley* and the *Seawitch* had left their convoy to steam directly to Tjilatjap, the one Javanese port still free from enemy air attack. A naval escort was sent from Tjilatjap to meet the *Langley* but there was some confusion in the arrangements for the rendezvous. Eventually, as she approached the Java coast, accompanied by two American destroyers, the *Edsall* and the *Whipple,* an enemy reconnaissance aircraft appeared. That was the beginning of the end. About noon on the 27th nine Japanese bombers attacked, and after receiving five direct hits *Langley* was abandoned as a derelict and later sunk by gunfire from *Whipple, Edsall* rescuing most of her crew and the American Kittyhawk pilots and ground staff. Two of these pilots were wounded and when the tanker *Pecos,* Fremantle-bound, arrived on the scene, they were transferred to her. But *Pecos* too was sunk by enemy bombers soon after resuming her voyage.

The *Edsall* also was lost, disappearing with all hands.[5] *Seawitch,* escaping detection, reached Tjilatjap safely on the 28th and the crated Kittyhawks were unloaded, but by this time it was too late to assemble them and put them into operation. The Dutch denied them to the enemy by dumping them into the harbour. In Wavell's words, "This [the loss of the two consignments of fighters] destroyed the last chance of prolonging fighter resistance to the Japanese air force."[6]

[5] Later it was learned that *Edsall* was sunk when she encountered two battleships supporting Admiral Nagumo's main carrier force which was operating to cut off Allied ships attempting to escape to the south.

[6] From the beginning of the Pacific War to the date of arrival of the last American consignment that could have been intended for Java (1st February), 198 American fighter aircraft (all Kittyhawks) were delivered to Australia. Shipments in the period were: 23rd December—18; 12th January—55; . . . January—70; 1st February—55; total 198. Of these only 38 reached Java in time to be used in operations. This gave rise to the unwarranted charge that aircraft were being retained for Australian defence, an error made even by Wavell himself in his campaign despatch (para 17). Of the 198 Australian deliveries, the last 55 were too late for assembly and transport to Java, 32 were lost in *Langley* and 27 from *Seawitch* were destroyed by the Dutch —a total of 114, leaving 84. Of these, 44 were lost on ferrying flights to Java, and 38 were delivered. Two are not accounted for. Details of the delivery flights are:

Unit	Number taking off	delivered	lost
17 Squadron	17	13	4
3 ,,	25	8	17
20 ,,	25	17	8
33 ,,	15	nil	15
Totals	82	38	44

The pilots of No. 13 Squadron and those of No. 33 Squadron not diverted to Darwin, together with their ground staffs, were lost on the sea voyage to Tjilatjap. Delivery statistics also show that aircraft of other types intended for ABDA Command were sent on as speedily as possible. Some of these were also lost en route but none was withheld for Australian defence.

The influx of the air force units from Sumatra, units for the most part without aircraft and separated from their equipment and therefore in considerable confusion, when added to the crowds of civilian refugees clamouring for passages in outgoing ships, had produced chaotic conditions on the docks at Tanjong Priok, the port of Batavia.[7] But Air Vice-Marshal Maltby, who had arrived with the nucleus of a staff on 14th February, succeeded in creating order among the units in his command. Fighter and bomber group headquarters were improvised and an operations room and filter room (this last staffed by keen young Dutch volunteers) were linked to Abdair operations room, the fighter aerodromes, the Dutch observer system and Batavia's anti-aircraft defence headquarters. Two radar sets were operating on the outskirts of the town. The three Hudson units (Nos. 1 and 8 Squadrons R.A.A.F. and No. 62 Squadron R.A.F.) were based at Semplak, close to Buitenzorg, about half-way across the island and due south of Batavia, where a number of Dutch aircraft were also based. No. 1 Squadron had 13 aircraft, Nos. 8 and 62 each had 6, all of them seriously combat-worn. Semplak had a single runway with dispersal pens crowding along either side, the pens being reached by taxiing over bamboo matting laid over the mud in which the aircraft frequently bogged. The aircraft state of Nos. 8 and 62 Squadrons was now so low that on 20th February they were instructed to hand over their aircraft to No. 1 and then disband and leave Java. Five officers and 46 airmen from No. 8 and 4 R.A.F. crews were attached to No. 1, from which a similar number of fatigued members of the squadron were transferred to No. 8. Under orders from Abdair 10 complete crews from No. 8 Squadron were flown to Darwin to reinforce Nos. 2 and 13 Squadrons.[8]

In the interval between leaving Singapore and their departure from Java No. 453 Squadron was troubled by the ills that can befall a unit when harmony with its command has been broken. Arriving at Batavia on 10th February the squadron moved to Buitenzorg where it was quartered in the R.A.F. transit camp. Without aircraft there was no active squadron work and so, apart from routine camp duties, the unit rested—physically at least. The hurt to the unit's pride caused by the accusation of "yellowness" made by R.A.F. staff officers in the last days at Sembawang still smarted. There was proof of this when, after he had addressed all the officers in the Buitenzorg camp in general terms on service pride, discipline and morale, Air Vice-Marshal Maltby summoned the officers of No. 453 and addressed them again, separately and particularly, on the same subject. Conscious of having thus been singled out, Maltby's audience found his praise of the "subsequent good behaviour" of their squadron faint enough

[7] ". . . the scenes enacted a few days before in Singapore were reproduced on an even larger scale in Batavia. Equipment, motor transport, abandoned cars, goods of every size, description and quality, littered its choked quays, and still troops and air force ground staff poured in, hungry, disorganised and, for the moment, useless."—D. Richards and H. St G. Saunders, *Royal Air Force 1939-1945*, Vol II, *The Fight Avails* (1954), p. 46.

[8] The remainder of the squadron—14 officers and 132 other ranks—sailed from Batavia in the *Orcades* on 22nd February, and on that day and the 23rd, the R.A.A.F. Headquarters staff left Java in the steamers *Thepsatrin Nawa* and *Edendale*, disembarking at Fremantle on 5th March, while Nos. 8 and 453 Squadrons disembarked at Adelaide on 15th March.

at first and certainly damning when he referred once more to the Sembawang accusation. Resentment was increased when he refused the adjutant, Flight Lieutenant Wells,[9] permission to explain that incident. There was further unrest when members of the unit were blamed—unjustly, according to later evidence—for a fracas in a Buitenzorg cafe. Finally Wells came into direct conflict with the authority of his commanding officer, Squadron Leader Harper, on the question of the prospects for the return of the squadron to Australia. But McCauley, acting in collaboration with Hewitt and Thomas, and in keeping with instructions from General Brett that all air force members without aircraft or arms should be evacuated as speedily as possible, had put his own plans into operation, and 700 members of the R.A.A.F., including No. 453 Squadron, had joined 2,000 members of the R.A.F. for embarkation in the *Orcades* at Tanjong Priok.

Sharing attacks on the enemy in the Palembang area with the Blenheims of No. 84 Squadron, No. 1 Squadron's crews combined photo-reconnaissance and attack missions. As an example, the crew of one aircraft photographed the area allotted to them and then set a 10,000-ton ship on fire in the Musi River with two direct hits and a near miss. On the same day (the 22nd) Semplak was subjected to 30 minutes of continuous strafing by Zeros. Six Hudsons were burned in their anti-blast pens and three others riddled by gunfire. Next day six aircraft with full crews moved to Kalidjati, a large aerodrome with comparatively strong anti-aircraft defences, but on the 24th the enemy struck at this aerodrome with dive bombers and two more Hudsons were lost. They raided again on the 26th, but this time the British Bofors gun crews took revenge and five enemy aircraft were probably shot down. For their next attack the enemy aircraft came over at high altitude.

Beset by difficulties common to their Allies, the American squadrons also strove hard. The Kittyhawk pilots claimed 10 enemy planes shot down between 21st and 26th February. The Flying Fortress crews too claimed successful attacks on enemy shipping and the destruction of aircraft on the ground. But in fact, like the whole Allied effort from Java at this time, these could best be described as "successful failures"—the enemy could well afford such harm as they inflicted.

Allied Intelligence reports on the 20th clearly indicated the rising storm of the Japanese invasion—90 enemy ships were reported to have assembled off Jolo Island while others were known to be assembling at Muntok on the coast of Banka Island. Four days later a large Japanese convoy with naval and air escort was sighted steaming south through Macassar Strait and, in keeping with the enemy's pre-invasion tactics, the intensity of their air offensive was increased. Practically every Allied base in Java was raided almost daily and Allied aircrews frequently faced odds as heavy as ten to one.

W Cdr W. K. Wells, 261032. 453 Sqn; RAAF HQ 1942; North-Western Area HQ 1943-44; RAAF HQ ME 1945-46. Schoolmaster; of Hamilton, NSW; b. Newcastle, NSW, 14 Jan 1914.

General ter Poorten anticipated that the Japanese would attack to the east in the Surabaya area and from Sunda Strait to the west. His main land forces were concentrated to cover the port of Batavia and the seat of government at Bandung, with the protection of Surabaya naval base next in importance. The two A.I.F. battalions with the squadron of the 3rd Hussars, an A.I.F. company of engineers, part of the American artillery battalion, and a British signal section, were formed into a mobile striking force named "Blackforce" after its Australian commander, Brigadier Blackburn.[2]

There were various Allied naval manoeuvrings on the night of the 25th-26th, but the enemy was not encountered. A major part of the British naval component, under the command of another Australian, Commodore Collins,[3] designated "Commodore Commanding China Force", had joined Admiral Doorman's Eastern Striking Force on the morning of the 26th to form the Allies' Combined Striking Force.[4] At noon that day 30 Japanese transports, escorted by 2 cruisers and 5 destroyers, were sighted heading west by south from a position about 200 miles north-north-east of Surabaya. Doorman was ordered to make a night attack. His entire force left Surabaya at 6.30 p.m. in the hope of intercepting the enemy. About the same time American bombers sighted the Japanese convoy about 20 miles to the north-east of Bawean Island. Reports reaching bomber command were "confusing and incomplete".[5] But not only was bomber command confused; the vitally important information did not reach Doorman until some four hours later, when, of course, it was useless. About 2.30 p.m. on the 27th, as his ships were re-entering Surabaya Harbour, the Dutch commander received a report that two enemy convoys had been sighted less than one hour earlier, the nearest of them 20 miles west of Bawean Island. Doorman immediately turned his ships about and moved to meet the Japanese. Throughout that night and into the next day the Allied ships fought a series of sea actions against a force which had constant air reconnaissance. Its aircraft kept Doorman's ships shadowed continually from the time they put to sea—even through the night actions when they dropped flares to silhouette them.

In this, the battle of the Java Sea, the Allied force was utterly defeated. All 5 cruisers and 6 destroyers were lost, its very gallant and ill-starred commander, Admiral Doorman, going down with his flagship *De Ruyter*.[6] The Australian cruiser *Perth* and the American cruiser *Houston* were

[2] Brig A. S. Blackburn, VC, CMG, CBE, ED. (1st AIF: Capt 10 Bn.) CO 2/3 MG Bn 1940-42; Comd AIF in Java 1942. Solicitor; of Adelaide; b. Woodville, SA, 25 Nov 1892. Died 24 Nov 1960.

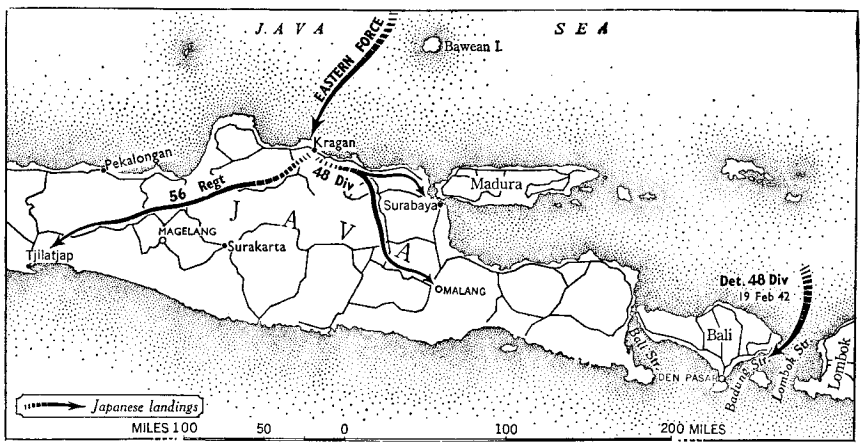
[3] Vice-Adm Sir John Collins, KBE, CB; RAN. (HMS *Canada* 1917-18.) Comd HMAS *Sydney* 1939-41, British naval forces in ABDA Area 1942; HMAS *Shropshire* 1943-44, Aust Sqn 1944, 1945-46; First Naval Member and CNS 1948-55. Aust High Commnr to NZ since 1956. B. Deloraine, Tas, 7 Jan 1899.

[4] The Combined Striking Force comprised two 8-inch cruisers—HMS *Exeter* and USS *Houston*; three 6-inch cruisers—HMAS *Perth*, RNNS's *De Ruyter* and *Java*; 9 destroyers—HMS's *Electra*, *Encounter* and *Jupiter*; USS's *John D. Edwards*, *Alden*, *Ford* and *Paul Jones*; RNNS's *Witte de With* and *Kortenaer*.

[5] Craven and Cate, Vol I, p. 397.

[6] Two of the lost destroyers, *Evertsen* and *Pope*, were not in Doorman's force when it put to sea on 26th February.

sunk in a fierce battle in Bantam Bay against an enemy force of 4 cruisers and 9 destroyers, but not before they had sunk 4 enemy transports and damaged several others. Apart from one Dutch destroyer (*Witte de With*) which, with a sister destroyer, was put out of action in a bombing attack on Surabaya Harbour several days later, the only ships of the Combined Striking Force to survive the battle were the 4 ageing American destroyers which succeeded in reaching Fremantle on 4th March. The enemy's losses were negligible, not one warship being sunk.

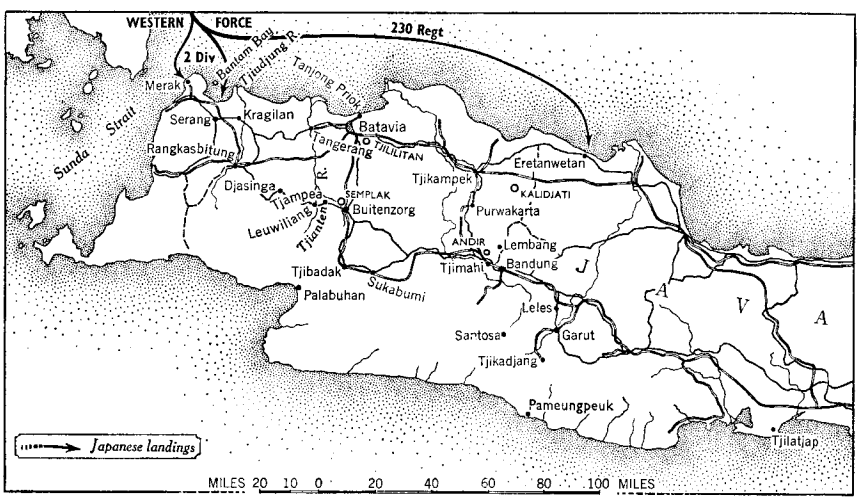


The invasion of Bali and eastern Java

Half an hour after midnight on 1st March *Eastern Force* of about 40 transports carrying the *48th Division* and *56th Regiment* hove to off Kragan, about 100 miles west of Surabaya. All available Allied aircraft went in to the attack. Though they suffered some losses in troops and damage to their ships, the Japanese, with moonlight and calm weather to aid them, went ashore. Only one company of Dutch troops opposed them and these were quickly overcome. The invasion force then moved rapidly inland. The *48th Division* advanced on Surabaya and, since the Dutch army forces in east Java could do no more than fight minor delaying actions, the Japanese were in the outskirts of the city by the evening of the 7th. On the 8th both Surabaya and Malang had been occupied. Simultaneously, the other part of the force that had landed at Kragan (the *56th Regiment*) had advanced across the island and captured Tjilatjap on the 7th. As ter Poorten had predicted, the enemy made their assault in the west as well as the east.

The *Western Force* comprising the *2nd Division* and *230th Regiment* had divided, the *2nd Division* landing on either side of the peninsula between Merak and Bantam Bay and the *230th Regiment* at Eretenwetan, 150 miles to the east. It was the Bantam Bay force that *Perth* and *Houston* had come upon, sinking four of its vessels.

The convoy bound for Eretanwetan had been sighted while it was still about 50 miles off shore. By this time there were only two Hudsons still combat-worthy, but these joined with the Blenheims in the attack. One made three successive sorties over the convoy, on two of which they scored a direct hit on an enemy transport. The attack was maintained late into the night and when it ceased the crews had almost reached complete exhaustion. But at 5 a.m. that day (1st March) Dutch officers at Kalidjati warned all on the aerodrome that the enemy force had landed on the beach at Eretanwetan and, despite valiant efforts by the Hurricane pilots, who had caused many casualties and destroyed a number of their barges, they were now pressing inland. It was expected that Kalidjati would soon be invested.



The invasion of western Java

Hurried plans were made and 2 of the 4 airworthy Hudsons took off for Andir, the Bandung airfield. Before the other 2 aircraft could be taken off the advanced elements of the Japanese column had reached the outskirts of the aerodrome. The joint British and Dutch aerodrome defence force, in which the Bofors gun crews were conspicuous, went into action at close range. But the enemy had now brought up tanks and armoured cars and it was obviously only a matter of time before the small defence force would be overwhelmed. They continued to fight with great determination and though few, if any, survived, their gallant stand gave one crew time to reach one of the remaining Hudsons and Flying Officer Gibbes, who had been unable to find a crew, time to race to the other. As both aircraft taxied out for take-off, Gibbes having started the engines of his Hudson single-handed, the enemy tanks opened fire on them, but before the tank gunners could get their sights adjusted both

aircraft took off and escaped. Although alone, Gibbes circled and flew low over the aerodrome, firing his two forward guns into the enemy troops before setting course for Andir.

Meanwhile the remainder of No. 1 Squadron at Kalidjati under the temporary command of Flight Lieutenant Verco,[7] had moved across the aerodrome to where they had motor transport parked and, evading the enemy, made their way safely to Bandung. The weary Blenheim crews, whose billets were some distance away, were unable to reach their aircraft before the enemy had captured the aerodrome. Meanwhile the squadron commander, Wing Commander Davis, who was directing the salvaging of Hudsons at Semplak, had decided to move his party of 140 officers and men back to Kalidjati that morning. Hearing that the situation there was uncertain, he moved them instead to Bandung, leaving 10 airmen in charge of Flying Officer Hughes[8] to make a determined though vain bid to get yet one more Hudson into the air before the enemy overran Semplak.

Using more than 50 aircraft the Japanese pounded Andir aerodrome in a fierce attack on the morning of the 2nd. After this raid their bombers and fighters appeared over the station at intervals throughout the day. On the evening of the 4th 20 officers and 34 wireless air gunners, members of No. 1 Squadron, were dispatched hurriedly to Tjilatjap in the hope that they would be in time to embark in one of the ships due to leave for Australia. Five flying crews and their ground staff remained at Andir. But that same day Britair, as the R.A.F. Headquarters had recently been named, authorised the immediate flight to Australia of as many Hudsons as were airworthy. The crews had been experimenting with an ingenious improvised method of in-flight refuelling (from petrol tins) and were in no doubt about the fuel capacity of the Hudsons so fitted.[1] Thus the last three aircraft the squadron could fly took off on 5th and 6th March for Port Hedland, on the coast of north-west Australia. Each carried its normal crew with two sick aircrew members as passengers. From Tjililitan the Hurricane pilots, who had fought magnificently, were forced back to Andir where, by 7th March, with the end of the struggle but a few hours off, their last two aircraft were destroyed by the men who had flown and serviced them.

The Javanese capital was now under direct threat for on the 7th an enemy column reached Lembang, only seven miles from Bandung. On the 5th, the Dutch garrison having withdrawn from Batavia, the Japanese moved in to occupy it.

Blackforce, fighting a strong action on the river at Leuwiliang, where it had successfully held the enemy, was also given the task of keeping open

[7] Sqn Ldr C. C. Verco, 280522. 1 Sqn; Fighter Sector Controller Western and North-Western Areas 1942-45. Credit officer; of Adelaide; b. Adelaide, 15 Nov 1915.

[8] Sqn Ldr B. E. Hughes, 724. 2, 1 and 6 Sqns; Controller HQ Eastern Area 1943-44. Regular airman; of Brunswick, Vic; b. Brunswick, 3 Aug 1916.

[1] Each aircraft carried an additional 100 gallons of petrol in 4-gallon tins. Refuelling was done by knocking out a side window and reaching out and opening a wing tank. A length of rubber tubing was thrust into the tank and petrol was poured out of the tins through a strainer and funnel down the tubing and into the tank.

the road through Buitenzorg for the Batavia garrison's withdrawal. When that had been achieved Blackforce fell back on Bandung. But the situation was now extremely grave. General ter Poorten informed a conference of his commanders in the capital on the 5th that he proposed to withdraw his troops and declare it an open city. He also informed the conference that his own troops had been ordered to disregard any subsequent order from him to cease fire; they were to keep on fighting.

At this stage Major-General Sitwell,[2] the senior British army officer on Java, and Air Vice-Marshal Maltby were planning resistance operations to be undertaken by the combined British forces in the hills. About 30 miles north of Tjilatjap, where an evacuation centre had been formed for unarmed members of the air force, there were still about 2,500 officers and other ranks. As all prospects of further evacuation had now passed, and as they could not be regarded as a fighting force, they were instructed to place themselves under the orders of the local Dutch commander and surrender when called on to do so.[3] The remainder of the R.A.F. and R.A.A.F. force, numbering about 1,750 armed officers and other ranks, were ordered to join Blackforce. With this addition the force would be about 8,000 strong.

Batavia had now been lost, Surabaya was being invested, the enemy had an air base at Kalidjati, Tjilatjap had been occupied, and Japanese forces were closing on Bandung from the north and from the west. At 9 a.m. on the 8th March General ter Poorten broadcast a proclamation that organised resistance by the Dutch Army in Java would end. That day in company with the Governor-General ter Poorten met the Japanese commander at Kalidjati and agreed to the surrender of all troops in the Netherlands East Indies. The text of his proclamation together with a message from ter Poorten stating that he expected all Allied forces to surrender with the Dutch was transmitted to the British headquarters soon after 10 a.m. that day. In spite of the Dutch commander-in-chief's earlier statement that he expected such an order to be disobeyed the Dutch troops stopped fighting. Sitwell and Maltby weighed the difficult question. There were many practical reasons why resistance should not be continued. Weapons were inadequate, the men were untrained for jungle and mountain fighting, and they had only four days' rations on hand, little motor transport, and no fuel but what was in the tanks of the vehicles they possessed. With few medical facilities, and little in the way of medical supplies, a high rate of sickness could be expected while fighting in the rainy season. These were some of the reasons. More important still, neither the native population nor the Dutch themselves could be counted on for support; already the Dutch had withdrawn their liaison officers. But the factor that weighed most heavily with Maltby

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[2] Maj-Gen H. D. W. Sitwell, CB, MC. GOC British Troops Java 1942. Regular soldier; b. 25 Oct 1896.

[3] Evacuation of members of the air force, with priority for aircrews and technical staff, had been proceeding and, by 5th March, 7,000 had been moved. There were now no ships left for further evacuation.

and Sitwell was the implication of Allied compliance in ter Poorten's proclamation. If that was correct then troops resisting would, by international law, become liable to summary execution if captured. Further, their unarmed comrades, who had no choice but to surrender, would almost certainly be the victims of severe reprisals. Thus, at 2.30 p.m. on 8th March, all British, Australian and American troops were ordered to lay down their arms—for them the battle for Java had ended.

One postscript is needed. A total of 120 members of No. 1 Squadron had been sent back to Australia. Luck was against those who went to Tjilatjap; on the 5th the port was blasted by enemy bombers and all the ships in the harbour were sunk. There thus remained in Java 160 officers and airmen of the squadron. A plan for their evacuation by flying-boat had been made. In keeping with this plan the party now waited at the rendezvous, a beach on the south coast near Pameungpeuk. As they waited the hours lengthened into days and their anxiety changed into resignation. The flying-boat never came.[4] The whole party, including their always resolute commanding officer, Wing Commander Davis, became prisoners. As he had led them through the stress of the Malayan, the Sumatran and the Javan campaigns, so now Davis still led them as they submitted to the bitterness of captivity.

The commanding officer of No. 84 Squadron, Wing Commander Jeudwine,[5] and eleven others, including eight members of the R.A.A.F., made a remarkable escape to Australia in an open boat. They left Java at dusk on 7th March. Rations were used sparingly and enough rainwater was collected to keep the men alive. On the first day of the voyage a Japanese submarine surfaced near by but took no action. About a month later a big whale surfaced, examined the little craft "for what seemed a life-time" and then submerged. On 18th April the party landed on Fraser Island whence they were rescued by flying-boat and taken to Shark Bay. They had sailed 1,500 miles and been at sea for 44 days.[6]

To put the final seal to the Japanese possession of the entire Netherlands East Indies, with the exception of Dutch New Guinea, the Japanese *Guards Division* embarked on 8th March at Singapore for the virtually bloodless invasion of northern Sumatra. Simultaneously part of the *38th Division* moved north from the Palembang area to assist in completing the occupation.

A Japanese officer who at that time was a member of the General Staff Headquarters, made a post-war summary in which he declared: "In order to carry out war, it was absolutely necessary to hold securely

[4] The flying-boats operating this shuttle service were destroyed when enemy fighters raided Broome on 3rd March.

[5] Gp Capt J. R. Jeudwine, DSO, OBE, DFC, 33116, RAF. Intelligence duties Air Ministry and ME 1940-41; comd 84 and 55 Sqns RAF 1942, 6 and 3 Ferry Control Units RAF 1943, 619 Sqn RAF 1943-44, RAF Stns Dunholme Lodge and Strubby 1944-45. Regular air force offr; b. Filey, Yorks, Eng, 9 Jul 1913. Killed in aircraft accident 19 Oct 1945.

[6] The Australians on board were Pilot Officer M. S. MacDonald and Sergeants G. W. Sayer, W. N. Cosgrove, J. A. Lovegrove, A. C. Longmore, A. C. E. Snook, P. A. Haynes, and P. M. Corney.

the southern natural resources areas and thus enrich . . . and strengthen our military power." On 8th March 1942 it must certainly have appeared to the Japanese General Staff that that objective had been achieved.

The Japanese had accomplished the most ambitious, widespread and successful series of amphibious operations yet undertaken in the whole world at war. It was the work of only their "right hand", the palm of which rested heavily on French Indo-China, Siam and Burma; the thumb was on the Philippines, and the little finger crooked over the Malayan Peninsula. Three long fingers, representing the three forces, had now clutched the very heart of the Dutch island territories. To achieve this the forefinger (the *Eastern Force*) had been thrust through Celebes to Timor and had then moved across to Bali. The middle finger (*Central Force*), later to be crossed with the forefinger, had been pushed down the east coast of Borneo to Bandjermasin; and the third finger had been stretched from Camranh Bay in Indo-China, across the South China Sea and deep into southern Sumatra. As each phase of the invasion plan was undertaken it was the air units that had made the first thrusts, neutralising the Allied forces before they could focus sufficient strength where it was needed. The onslaught on Darwin not only illustrated this very clearly but provided a classic example of the right use of coordinated land and sea-based aviation.

For the air support of the whole operation against Java there were 409 aircraft from the Navy's *XI Air Fleet* and the Army's *3rd Air Division* (which had its forward units in southern Sumatra. The *XI Air Fleet* was called on to provide 190 of these aircraft—115 land-based bombers, 70 Zero fighters and 5 reconnaissance aircraft. The *3rd Air Division* was to provide 169 aircraft—30 heavy bombers, 20 twin-engined light bombers, 20 other attack aircraft, 80 fighters and 19 reconnaissance aircraft. In the preliminary air attacks the four air regiments of the *3rd Air Brigade* (one of the three brigades of the *3rd Division*) raided Buitenzorg, Bandung, Kalidjati, Batavia and Tjilatjap, making a total of 203 fighter and 142 bomber sorties in which they claimed to have destroyed 33 Allied aircraft and damaged 53, for a loss of 3 of their own.

On the 28th, as *Eastern Force* was approaching its anchorage off Kragan it was attacked by "about 10 dive bombers", according to a Japanese report. One transport was damaged and ran aground and in another transport, which received a direct hit, about 150 men were either killed or wounded. At dawn about 15 fighters attacked the convoy but there were no losses and the landings were made as planned.

By 3rd March the main force of *3rd Air Brigade* had moved to Kalidjati from where its units "attacked enemy mechanised forces and prevented them from re-taking the airfield". Meanwhile Nagumo's *First Carrier Fleet* had left Staring Bay once more (on the 25th) and moved into the northern waters of the Indian Ocean. Several days later the force was joined by Vice-Admiral Kondo's force. This powerful fleet, hunting down Allied ships withdrawing from Java, accounted for the tanker *Pecos* and the American destroyer *Edsall* after the *Langley* had been sunk. On 5th March Tjilatjap was attacked and 13 Allied transports were claimed as sunk. As a final gesture of their mastery of the Indies waters, the force shelled the tiny British possession, Christmas Island, about 300 miles south-west of Tjilatjap on 7th March. Two days later the fleet withdrew again to Staring Bay.

CHAPTER 23

ASSAULT ON NEW GUINEA

IN March 1942 the Australian continent lay nakedly across the path of the Japanese southward drive. The island perimeter now held by the enemy forces was separated from Australia's northern coastline by a few hundred miles of sea. From now, until those forces had been driven back, the war in the Pacific must be fought from and over British Commonwealth territory and the adjacent seas. Since Anglo-American policy for an offensive against the Axis powers had been decided resolutely on a Europe-first basis, the best that could be expected of the Allied forces in the Pacific was to halt the Japanese forces until a major Allied offensive could be mounted. But the war was now three months old and as yet the enemy had not been held at any one point where they had exerted pressure. Two members of the New Zealand Cabinet, accompanied by the three New Zealand Chiefs of Staff, had conferred with the Australian Advisory War Council and Chiefs of Staff on 23rd February. After surveying the war situation as it concerned the Anzac Area, the Chiefs of Staff of the two Dominions jointly proposed the appointment of a Supreme Commander for all Allied forces in "an extended Anzac Area".

To hold the Japanese in check the retention and development of Port Moresby as a major base were essential, yet only at sea were the Allied forces then available strong enough to withstand any serious enemy thrust, and these naval forces were widely dispersed. The land and air forces comprised:

Army—A brigade group of troops, two 6-inch coast guns and four 3.7-inch and six 3-inch anti-aircraft guns;
Air force—Two reduced squadrons of Catalina flying-boats (six aircraft), and one reduced squadron of Hudsons (seven aircraft).[1]

It is true that the Australian Chiefs of Staff considered that any seaborne assault on Port Moresby from Rabaul would be a distinctly hazardous operation for the enemy, but they had acknowledged, in an appreciation dated 27th February, that the Allied land-based forces were much below the required strength. They decided not to increase the strength of the army garrison (the brigade group was the limit allowed by the maintenance capacity at that time), but to send at least some air reinforcements and to increase the strength of the land-based air units on the mainland. Thus, unquestionably, the navy and naval aviation, formed the first line of defence.

Allied naval forces and naval aviation had, in fact, shown their hand only a week before this appreciation was made. The Anzac Squadron—when formed on 12th February it included the heavy cruisers H.M.A.S.

[1] One squadron of Kittyhawk fighters (18 aircraft) was expected to be available about 15th March.

Australia and U.S.S. *Chicago,* two light cruisers H.M.N.Z. ships *Achilles* and *Leander,* and two American destroyers—had the task of guarding the eastern approaches to Australia and New Zealand. A watch was kept for signs of an enemy force moving towards Australia from Rabaul, but at that stage it seemed to the American commanders that Samoa was a more likely objective for a Japanese expeditionary force—either from Truk or the Marshall Islands—and the Allied watch was more strictly in that direction. Even so the building of Japanese strength at Rabaul was menacing and an attack on that base was planned. For this, the Anzac Squadron was to be joined by the *Lexington* Group, a force built round the aircraft carrier of that name and commanded by Vice-Admiral Wilson Brown. On the morning of 20th February the *Lexington* Group, which had to steam 3,000 miles from Pearl Harbour, was in position to the north of the Solomons and about 350 miles east of Rabaul when the radar screen in the carrier showed unidentified aircraft. The carrier promptly sent out Grumann Wildcat fighters which encountered three enemy four-engined flying-boats, two of which were shot down. One having escaped, the position (and possibly the intention) of the American force would be known to the enemy. Later that day the *Lexington*'s radar again showed aircraft, this time about 76 miles away, and soon afterwards American and Japanese carrier-borne aircraft fought their first battle. It ended with the Americans well in credit—two waves of nine enemy aircraft each, few of which escaped, were overwhelmed by the *Lexington*'s Wildcat pilots, whose losses were only one pilot and two aircraft. Despite this success, Brown would have been flirting with disaster had he continued on course to Rabaul with its strong and now forewarned air units. He prudently withdrew his force.

Though the air strength actually needed to make Port Moresby a base strong enough both for effective defence of the New Guinea area and for effective offensive operations against Rabaul was at this time no more than an intention, the Chiefs of Staff, on 5th March, assessed it at 13 squadrons, thus: 4 fighter, 2 flying-boat (reconnaissance), 2 dive bomber, one torpedo bomber, 2 heavy bomber and 2 transport units. A consequential obligation would, of course, be an appropriate aerodrome construction program. Both programs called for resources not yet available and much time, and the real point of concern lay in the underlying conviction in the minds of the Chiefs of Staff that the enemy would endeavour to attack Port Moresby in the very near future—perhaps even within a week or two. They estimated that to undertake such an attack the Japanese would have a division of troops supported by about 90 bomber and fighter aircraft from Rabaul and probably the added air strength of two or three aircraft carriers.

While these top-level appreciations were being composed and plans made for future strength, the commanders in the field were assessing the situation from the point of view of the forces already there. Early in February the air officer commanding North-Eastern Area, Air Com-

modore Lukis, had quoted reports from his staff officers to warn the Air Board of the unsatisfactory state of the defences at Port Moresby. One of the most disturbing aspects, he noted, was the poor morale of the army troops. "This does not mean that the troops will not fight," he wrote, "but they cannot overlook the lack of naval, air and political support. An impression is growing rapidly that the policy of the Government is to let the garrisons at Moresby and Thursday Island go, in the same way as that at Rabaul and that no serious assistance will be given. . . ." Lukis enumerated other problems. When the R.A.A.F. required the aid of the army for the construction of aircraft dispersal bays and taxiways, the garrison commander, General Morris (with complete realism) declined to lend his limited labour capacity without first receiving an assurance that aircraft would be sent to use them and, that, when aircraft were sent, they would not be "knocked out" in the first few raids for want of protection. The need for reinforcements to relieve the Catalina crews was urgent. Some had flown as much as 200 hours in three weeks, and obviously this could not continue. The fortress guns at Port Moresby had no overhead protection from dive-bombing and machine-gunning and could be knocked out before they had fired a shot in combat, as they had been at Rabaul. The anti-aircraft batteries were also very vulnerable because they were not armed against low-flying attacks. As was to be expected the frequently-appearing word in the report was "more"—more labour strength, more works equipment, more Catalina crews, more Empire flying-boats *and* more evidence of active interest by the Government. "A visit by one or more senior Commonwealth ministers would be beneficial," Lukis added. There was, too, the obvious (though in this instance modestly stated) request for "a small number of fighter aircraft".

The Catalina attacks on Rabaul continued to be most frequently directed at enemy shipping in Simpson Harbour. Enemy night fighters made their first interception over Rabaul on the night of 3rd-4th February while five Catalinas were attacking. They intercepted two of the flying-boats. One of these, captained by Flying Officer Higgins, evaded the enemy aircraft by diving to 1,000 feet and flying through a smoke screen conveniently provided by an active volcano on Matupi Island which flanks Simpson Harbour. The other aircraft, with Flight Lieutenant Hemsworth as captain, was attacked while held in the beams of the searchlights. Sergeant Dick,[2] armourer-air gunner, who was making his first operational flight, used his two Lewis guns in the port blister to such good effect that he saw the enemy aircraft go into a spin and from reports by other crews it appeared to have crashed into the water.[3] The Catalina by this time had been hit by gunfire in one propeller, the tail unit, along both wings, the port and starboard fuel tanks (which were not self-sealing), the oil tank, and the oil feed line. Hemsworth put the aircraft into an

[2] Sgt D. F. Dick, 13826. 20, 33 and 41 Sqns. Brass turner apprentice; of North Ballarat, Vic; b. Ballarat, 11 Oct 1922.

[3] This was the first Japanese fighter claimed as shot down in aerial combat in the New Guinea campaign; officially it was counted as a "probable".

evasive dive but had to feather the damaged propeller. The bombs were jettisoned and, when only 200 feet above the water, the crew threw out all loose gear that was not essential for flight. With petrol pouring into the interior of the aircraft from a damaged fuel tank, and flying on one engine, Hemsworth succeeded in keeping the Catalina airborne for more than five hours until, still on only one engine, in darkness without the aid of a flare path, and with petrol flooding up to the catwalks, he made a perfect "let down" on to the sea at Salamaua. Knowing that by remaining at Salamaua he would risk destruction on the water by enemy aircraft, Hemsworth was content with temporary repairs which allowed him to take off with two engines. Once airborne, he had to feather the damaged propeller again, and since it was impossible to climb over the mountains he flew to Port Moresby round the coast at an altitude of only 50 feet. When the Catalina alighted safely on Port Moresby Harbour at 5 p.m. on the 4th it had spent 25 hours and a half on the single operation and for 14 hours and a half Hemsworth had flown it on one engine. Maintenance crew counted more than 100 bullet holes in the aircraft.

Though it had few aircraft, Lerew's composite Hudson squadron was heavily involved in reconnaissance and attack operations and its pilots were showing signs of operational fatigue. This fact prompted Flight Lieutenant Campbell,[4] then attached to Port Moresby station headquarters as navigation officer, to pilot one of the Hudsons on a daylight photographic reconnaissance flight to New Britain, on 6th February.[5] Over Rabaul the Hudson crew saw an enemy fighter take off from Lakunai aerodrome. Four minutes later this aircraft was engaging them in combat at 10,000 feet. It made two attacks, breaking off the fight after having riddled the Hudson with bullet holes. An explosive bullet had shattered Campbell's left wrist and severed the little finger; the second pilot, Pilot Officer Lauder,[6] was seriously wounded, his left arm and leg being fractured and his right hand injured; the turret gunner, Sergeant O'Hea,[7] who had fired 100 rounds on to the enemy aircraft at a range of about 100 yards, was severely wounded in the left leg. The fourth member of the crew, Sergeant Thomson,[8] who was not wounded, gave first aid to his fellow crew members and then assisted Campbell in flying the aircraft. This had to be done without either altimeter or airspeed indicator, both of which had been smashed by bullets. The enemy fighter's gunfire had also hit the sea markers carried in the Hudson, exploding them so that the aircraft was filled with a dense cloud of fine aluminium powder.

Enduring the pain from his wounds and loss of blood, Campbell continued to pilot the Hudson throughout its 500 miles flight back to base,

[4] W Cdr D. W. I. Campbell, DFC, 250528. 24 and 13 Sqns; comd 1 Sqn 1943-44, 2 Sqn 1944, 32 Sqn 1945. Clerk; of Toorak, Vic; b. Melbourne, 16 Jul 1915.

[5] An account of this episode, written by Campbell, a poet and short story writer, appears in *Australia At Arms* (Editor, Norman Bartlett), 1955, pp. 179-88.

[6] F-Lt J. E. Lauder, 401648; 6 Sqn. Meter tester; of Box Hill, Vic; b. Brighton, Vic, 9 Nov 1915.

[7] F-Sgt G. A. O'Hea, 405464. 6 Sqn and 18 NEI Sqn. Bank clerk; of Kempsey, NSW; b. West Kempsey, 7 Dec 1918. Killed in action 28 Apr 1943.

[8] F-O G. Thomson, DFM, 400573. 6 and 32 Sqns and 4 CU. Salesman; of St Kilda, Vic; b. Manchester, Eng, 8 Jul 1920. Killed in aircraft accident 3 Mar 1945.

in bad weather. When close to Port Moresby one of the self-sealing fuel tanks, which had been damaged by gunfire, opened up as Campbell brought the aircraft down to make a landing. Just as he began the approach to the runway both engines failed. Thomson, with great presence of mind, operated the auxiliary fuel or "wobble" pump in time to revive them and allow Campbell to put the Hudson down safely on the runway. When the ground crew took the aircraft over for servicing and repair they found only five gallons of fuel left in the tanks.

An indication of the immediate Japanese intention was given when, on 9th February, an enemy force was sighted off Gasmata on the southern coast of New Britain, and a landing was reported. Two transports and a destroyer were anchored inshore close to Gasmata aerodrome and four destroyers were lying just outside the harbour. That night five Hudsons from the composite squadron and three Catalinas from No. 4 Squadron attacked. Flying in bad weather the formation was broken up and one Hudson crew did not find the target. The others dropped 500-lb and 250-lb bombs, but no hits were observed. On the return flight Wing Commander Lerew, who had led the attack, landed at Salamaua where a quantity of gold bullion was loaded into his aircraft and flown to Port Moresby. Four Hudsons returned to the attack, but again without success. On the 11th three Hudsons led by Lerew, with Flight Lieutenant Pedrina and Flying Officer Gibson[9] piloting the others, again attacked Gasmata and made the first mast-height attack on enemy shipping in the New Guinea campaign. One of the crews put four bombs across one transport directly amidships, another made a direct hit amidships on a second transport, while the third aircraft made a low-level sweep over the first transport using incendiary ammunition which set the ship on fire. Both ships were enveloped in clouds of black smoke. As the Hudsons climbed away they were intercepted by five or six enemy fighters. Pedrina's aircraft was attacked several times. His gunners shot down one of the aircraft in flames and probably destroyed another. The crew saw Gibson's aircraft, with one engine on fire and enemy fighters pursuing it, dive steeply into a hillside. Gibson and his crew—Pilot Officer Thorn,[1] and Sergeants Quail[2] and Coutie[3]—were all killed.

Lerew was just bringing his Hudson out from the attack when his second pilot, Flying Officer Watt,[4] reported that it was on fire. While Lerew took evasive action to throw off an enemy fighter, Watt broke the window and tried to put the flames out with a hand extinguisher. When this failed and the intensity of the fire increased, Lerew ordered the crew

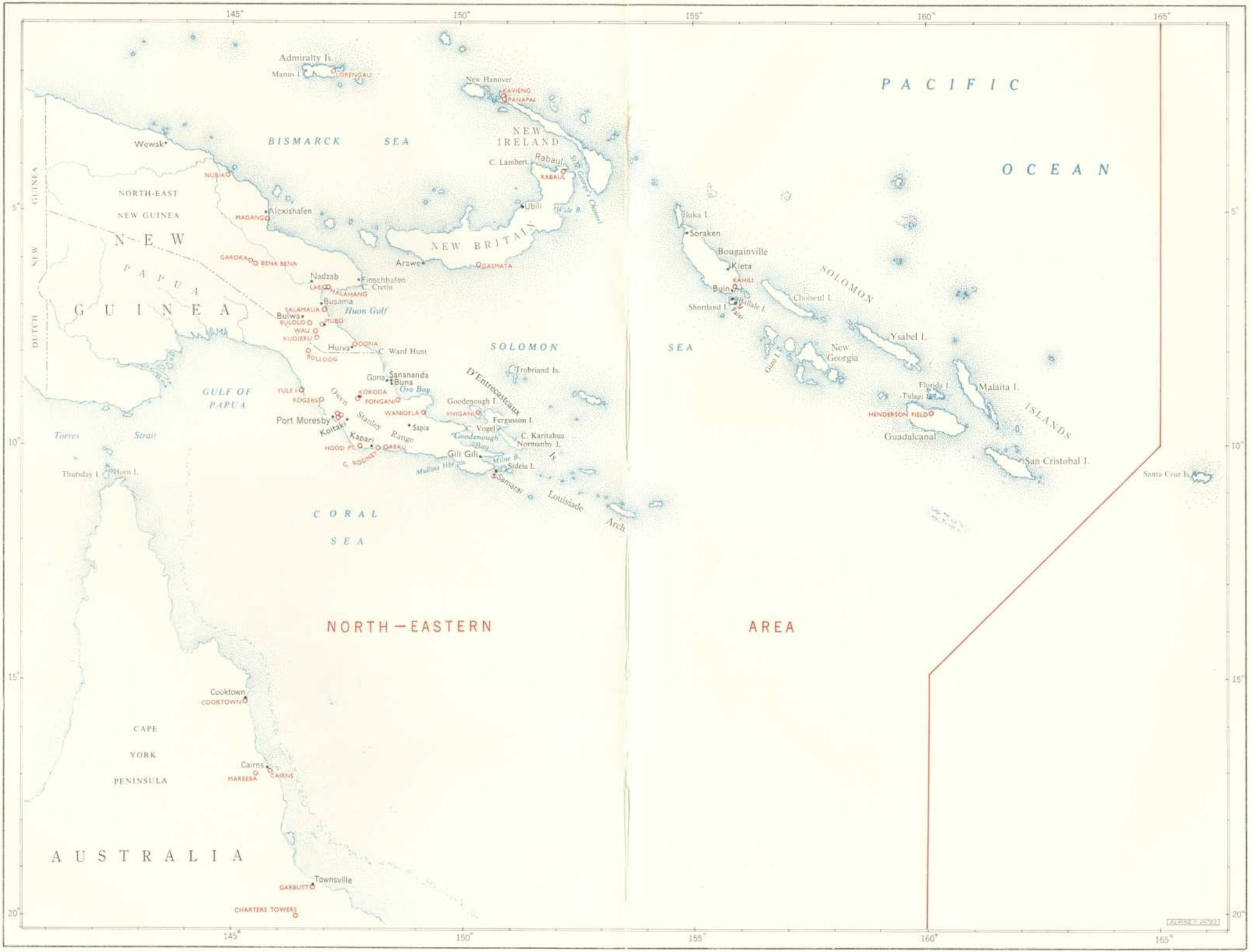
[9] F-O G. I. Gibson, 290657. 23 and 32 Sqns. Audit clerk; of South Perth, WA; b. Perth, 23 Jan 1916. Killed in action 11 Feb 1942.

[1] P-O F. L. O. Thorn, 401471. 6, 23 and 32 Sqns. Clerk; of Thornbury, Vic; b. St Arnaud, Vic, 16 Aug 1912. Killed in action 11 Feb 1942.

[2] Sgt A. E. Quail, 404748. 23 and 32 Sqns. Clerk; of Biloela, Qld; b. Warren, Qld, 8 Sep 1920. Killed in action 11 Feb 1942.

[3] Sgt B. I. Coutie, 405543. 23 and 32 Sqns. Farmer; of Brisbane; b. Melbourne, 20 Oct 1918. Killed in action 11 Feb 1942.

[4] F-O W. A. J. Watt, 270846; 24 Sqn. Public servant; of Atherton, Qld; b. Gymple, Qld, 29 Apr 1912. Killed in action 11 Feb 1942.



Eastern New Guinea and the Solomon Islands

to abandon the aircraft. Watt and the two other crew members, Sergeants McDonald[5] and Henry, then moved to the rear door to bale out. As the flames reached the cockpit Lerew, using the control column as a step, climbed up and tried to force himself through the window. The Hudson went into a dive so he pulled the column back with his feet, kicked the trimming tab and, as the aircraft climbed again, pushed his way through the window and baled out. In landing he fell into a tree and was suspended above the ground by his parachute with his "Mae West" life-jacket almost choking him, but he succeeded in getting free by pulling himself up into the branches of the tree. There was no sign of any of his crew. Living off the jungle, and several times evading parties of Japanese troops, he endured hunger and exhaustion until found by some friendly natives who eventually guided him to a coastwatcher's post. Nine days after he had been officially posted missing, he arrived back at Port Moresby in a schooner. The other members of the crew were lost.

Reconnaissance showed that the Japanese forces at Rabaul were being built up in an ominous way. On 14th February the crew of a Hudson piloted by Flight Lieutenant Milne[6] flew over Simpson Harbour and sighted an aircraft carrier, 5 other warships (believed to be 3 cruisers and 2 destroyers), 11 transports, and 9 flying-boats on the water; 3 seaplanes on the slips and 6 bombers and 8 fighters on the aerodrome. These reconnaissance flights were now almost invariably intercepted by enemy fighters several of which were claimed as probably destroyed by the Hudsons' gunners. On the 19th Pedrina's aircraft was attacked by two fighters over Arawe. The turret gunner, after firing 2,000 rounds, saw one of the attacking aircraft diving out of control. In this combat the wireless operator, Sergeant Marriner, fatally wounded, died on the return flight. The turret gunner returned with a spent bullet in one of his flying boots. One tyre on the Hudson's undercarriage had been punctured, portion of the flap cable severed and the airframe, turret and propellers had been perforated by bullets, but Pedrina brought it back and made a safe landing.

For a brief interval No. 32 Squadron had two American B-25 (Mitchell) bombers attached for reconnaissance duties and in March the unit's ground staff became hosts to the American Flying Fortresses and B-26 (Marauder) crews that staged through the Seven Mile aerodrome on operational flights, feeding the crews and refuelling and "bombing-up" the aircraft. But the first tangible evidence of substantial American aid in the defence of Port Moresby came in the form of 12 Flying Fortresses that were specifically allocated for service in the South-West Pacific. These bombers reached Townsville on 18th and 19th February. They belonged to No. 22 Bombardment and No. 88 Reconnaissance Squadrons and some of the crews had flown into Oahu while the Japanese were attacking Pearl Harbour on 7th December. After operating from their Hawaiian base

[5] Sgt K. D. McDonald, 11095. 24 and 32 Sqns. School teacher; of Mordialloc, Vic; b. Birchip, Vic, 2 Sep 1912. Killed in action 11 Feb 1942.

[6] Sqn Ldr W. L. Milne, 616. 23, 24, 32 and 99 Sqns; Controller North-Eastern Area 1943, SO Training 1943-44, SA Operations 1944-45 Accountant; of Melbourne; b. Kerang, Vic, 27 Jul 1916.

for two months they had been attached to an American naval task force charged with protection of the supply route between the United States and Australia. Now based on Garbutt aerodrome, Townsville, these crews, who had to do all their own maintenance and armament work, found themselves in the anomalous position of belonging to an American naval task force with which they had no direct contact.

On 23rd February they were given their first combat task in their new area: they were ordered to attack Rabaul. Nine aircraft were assigned to the operation, the squadron's commanding officer, Major Richard H. Carmichael, leading the first flight with Squadron Leader Cohen, commanding officer of No. 11 Squadron, accompanying him to help to select targets. Two aircraft collided while taxiing to the take-off point and it was decided that only two flights (six aircraft) would undertake the mission. New to the area and not well trained in navigation the American crews were in serious difficulty when they ran into bad weather. The aircraft of the second flight encountered a severe tropical storm and two of them returned to base, but one, in which was Pilot Officer Robertson[7] of No. 20 Squadron, and the three aircraft of the first flight pressed on and bombed shipping in Rabaul Harbour. Results were not observed: the aircraft bombed through anti-aircraft fire and, as they were completing their attack, fighters were rising to intercept them. On the return journey, over Gasmata, Zeros did attack the Fortresses, and the leading aircraft of the first flight, in which Cohen was flying, was damaged by machine-gun fire, and the wireless operator and the rear gunner were slightly wounded. All four aircraft returned safely to Port Moresby, however, where they refuelled before flying on to their home base at Townsville.

Two Catalinas were sent out from Port Moresby on the same attack. One of them failed to find the target and the other, piloted by Flying Officer Bolitho, dropped twelve 250-lb bombs in a pattern on the Vunakanau runway and building area. Though the result was very disappointing, this first combined combat mission was the beginning of an association between the R.A.A.F. and the U.S.A.A.F. that was to prove of great operational value and result in much good comradeship. For some time the most experienced of the R.A.A.F. Catalina pilots flew with the leaders of American formations to guide them in target selection and in countering enemy tactics. In fact, soon after this first attempt to strike the enemy at Rabaul, Carmichael's squadron was placed temporarily under R.A.A.F. operational control.

Meanwhile (on the 21st) the composite Hudson squadron had been named No. 32 General Reconnaissance-Bomber Squadron and Squadron Leader Kingwell[8] was posted from No. 23 Squadron to take command. With 10 aircraft the new unit had 29 officers (12 of them Hudson captains) and 176 other ranks. It had already endured many difficulties.

[7] F-Lt N. V. Robertson, DFC, 400046. 11 and 20 Sqns. Manufacturer; of East St Kilda, Vic; b. East St Kilda, 8 Mar 1918.

[8] Air Cmdre D. W. Kingwell, DSO, 138, Comd 23 Sqn 1941-42, 32 Sqn 1942-43, GR School Bairnsdale, 1943-44, 74 Wing 1944, 82 Wing 1944-45. Regular air force offr; of Brisbane; b. Brisbane, 15 June 1916.

Because the rest of the aerodrome was treacherously boggy the aircraft had to be parked along the sides of the runway. Remembering the defeat at Rabaul and fearful of losing all his aircraft on the ground in enemy air raids, Lerew had put every man to work, for "every daylight hour" as he reported, in an effort to make a dispersal area. His signals to North-Eastern Area headquarters still had the same challenging note that had already earned him disfavour with some senior officers. One read: "Urgently require large labour gang and road-making equipment . . . to avoid continued repetition of this state of unpreparedness." As an immediate dispersal precaution he was instructed to use the aerodrome at Horn Island in Torres Strait, 400 miles to the south, and was told that an endeavour would be made to give sufficient warning of proposed operations to allow the crews time to move forward to Port Moresby as required.

The timeliness of his warning was demonstrated about midday on the 24th when 10 enemy bombers made the first daylight attack on the Port Moresby base. Bombing from about 16,000 feet they blasted the squadron's camp area, wrecked all the buildings on the aerodrome, destroyed motor transport at that time irreplaceable, and a Hudson and a civil aeroplane parked on the aerodrome. An airman, AC1 Bower[9] of No. 32 Squadron, was killed and Squadron Leader Hoddinott[1] was wounded.

Port Moresby's first air raid had come at 3 a.m. on 3rd February when about six aircraft dropped 21 bombs from 8,000 feet. Apart from one casualty, an army sergeant who was killed, the attack was virtually ineffectual. About the same time on the 5th nine flying-boats bombed the town destroying two stores and a house. On the 28th eleven bombers escorted by five Zeros attacked the Catalina base in daylight with serious result—three Catalinas were destroyed at their moorings and a fourth damaged and the flying-boat squadrons' headquarters received a direct hit. When the bombers left, the strength of the base in serviceable aircraft on immediate call was three—two Catalinas and one Hudson. The first Japanese prisoner in New Guinea was taken in this raid: a fighter pilot whose aircraft was shot down in flames, baled out and was captured. He was taken to Melbourne for interrogation and provided valuable information on the composition of the enemy forces occupying Rabaul.

The demands made on the Catalina crews of Nos. 11 and 20 Squadrons continued, with repeated night attacks on Rabaul and long-range reconnaissance flights. On the night of 24th February Flight Lieutenant Beaumont and his crew failed to return from a raid on Rabaul and Flying Officer Bolitho and his crew had a close call when the failure of one engine forced the flying-boat down to within 200 feet of the ground and it was saved only by jettisoning the bomb-load. On the following night, also over Rabaul, Squadron Leader Cohen used his aircraft virtually

[9] AC1 H. C. M. Bower, 37472. 6 and 32 Sqns. Taxi driver and mechanic; of Strathfield, NSW; b. Sydney, 2 Jan 1916. Killed in air raid 24 Feb 1942.

[1] Sqn Ldr R. U. Hoddinott, 250340. (1914-18: 1 LH Bde, 2nd Lt RA and RFC.) Works and Buildings Inspection RAAF Stn Port Moresby 1942; comd 4 WMU 1942-43, WTU Flemington 1943; Wing Defence Offr 62 Works Wing 1944. Grazier; of Murchison, Vic; b. San Remo, Vic, 12 Aug 1890.

as a dive bomber, releasing his twelve bombs from 1,300 feet as he dived over Toboi wharf where a ship was berthed; eight of the bombs straddled the target. Squadron Leader Chapman[2] flew his Catalina over the same target on the night of the 27th and started a fire, the smoke from which rose to 5,000 feet, the glare of the fire being visible 30 miles from the target area.

The increase in the enemy's air strength which had been noted on 14th February was confirmed at the end of the month when reconnaissance reports showed that the Japanese had two squadrons of flying-boats on Rabaul Harbour, one of fighters on Lakunai aerodrome, one of heavy bombers on Vunakanau aerodrome, a detachment of flying-boats at Kavieng, and one squadron of fighters on Gasmata aerodrome. Intelligence reports brought news of the imminent movement of two squadrons of heavy bombers from the Philippines-Palau area for Rabaul. All this information, linked with consistent enemy reconnaissance sorties and the scale of the raids on Port Moresby, fitted the Japanese pre-invasion pattern that experienced Allied commanders had now come to recognise. Then, on the afternoon of 7th March, the crew of a No. 32 Squadron Hudson, captained by Flying Officer Hermes,[3] returning from a photographic reconnaissance, sighted five or six transports, escorted by a cruiser and four destroyers, steaming towards Lae and then about 56 miles north-east of Buna. The disadvantage the Allies suffered as a result of having their striking force based as far away as Horn Island and Townsville was heavy. By the time the first Hudson could bomb the enemy ships it was 11.35 a.m. (local time) on the 8th, and in the meantime the Japanese had put forces ashore at both Salamaua and Lae. Neither base was garrisoned to withstand invasion. The enemy ships had closed, uninterrupted, on the two anchorages in darkness. At first light both Salamaua and Lae were bombed and shelled, the bombardment achieving nothing but the destruction of a dump of petrol; there were no casualties. The Japanese troops then began to land at both points without opposition, the only Australian force being a detachment of the New Guinea Volunteer Rifles (a small but stout-hearted unit manned by residents of Papua and the Mandated Territory) and the staff of the R.A.A.F. radio station at Salamaua in charge of Sergeant Norman[4] and including Warrant Officer Burke[5] of the meteorological section. This small force engaged in what demolition was possible in the time—including the radio installations—and then withdrew into the hills towards Mubo.[6] In little more than four

[2] W Cdr F. B. Chapman, DFC, 271349. 20 and 11 Sqns; comd 11 Sqn 1942-43, 20 Sqn 1943. Regular air force offr; of Yanna Siding, Qld; b. Uralla, NSW, 20 Nov 1911. Killed in action 8 Mar 1943.

[3] Sqn Ldr A. S. Hermes, DFC, 260803. 24, 32 Sqns and 1 PRU; Controller North-Western and Southern Areas and Instructor 1 OTU 1943; comd 1 PRU 1944, 87 Sqn 1944, RAAF Stn Camden 1945. Plantation overseer; of Rarawai, Ba, Fiji; b. Adelaide, 5 May 1912.

[4] F-Lt D. A. Norman, 18044. RAAF Port Moresby; Offr i/c DF installation party North-Eastern Area and Directorate of RDF Services 1943-44. Draftsman; of Melbourne; b. London, England, 5 Dec 1919.

[5] F-Lt L. E. Burke, 36525. RAAF HQ Port Moresby, 230 BU, RAAF HQ 1944-45. Meteorological officer; of Salamaua, TNG; b. Jerilderie, NSW, 25 Jul 1908.

[6] Norman and Burke, with portable radio equipment, remained with the NGVR detachment for some time to provide their only link with Port Moresby.

hours the enemy had completed their troop landings and Lae and Salamaua had been occupied.

The first Hudson over the target, which dropped four bombs without effect, was followed by another piloted by No. 32 Squadron's commanding officer. Kingwell and his crew scored a direct hit on one transport which was on fire and listing as they left the target area. An enemy floatplane took off when the Hudson appeared but failed to intercept. Three more Hudsons followed in to attack, a near miss on one of the ships being the only observed result. Four Flying Fortresses staged from Townsville to join in the attack. One had to return because of engine trouble and the other three failed to find the target because of heavy cloud and poor visibility. Thus, apart from the success achieved by Kingwell and his crew, the enemy achieved their new bases without cost. Two days later Kingwell attacked a transport in Salamaua Harbour, scoring two near misses, and machine-gunned a naval pinnace. This crew returned that afternoon, accompanied by another Hudson piloted by Squadron Leader Sharp (previously attached to No. 24 Squadron), to bomb the runway.

Any sense of security the enemy may have gained from the fact that these attacks were rather sporadic and ineffectual was to be proved false that same day. Vice-Admiral Brown, still eager to make a carrier force strike on Rabaul, had asked for and been given an additional carrier (the *Yorktown*) and two tankers.[7] His force had been given the task of escorting a convoy carrying 15,000 American troops which had been trans-shipped at Melbourne and were then on their way to Noumea. Thereafter it moved north to take up a position from which to attack Rabaul, but while doing so Brown learned of the Japanese landings at Lae and Salamaua. With this new target offering, the question was whether the force should move into the Bismarck Sea or into the Gulf of Papua. Though the carriers' aircraft would have to cross the Owen Stanley mountains to make the attack, the Gulf of Papua offered greater security than the largely uncharted waters of the Bismarck Sea, where too the risk of air attack from Rabaul was much greater. Thus *Lexington* and *Yorktown,* escorted by four cruisers and nine destroyers, steamed undetected by the enemy to a position about 45 miles off the southern coast of Papua. Commander W. B. Ault, of the *Lexington*'s air group, flew to Port Moresby for a special briefing on local geography and attack tactics and then, early on the 10th, flew his scout bomber to a position over the gap in the Owen Stanley Range through which Allied aircraft normally crossed to the north coast at between 7,000 and 8,000 feet, so avoiding the climb to about 13,000 feet that otherwise was necessary. Here, about 8.30 a.m., he "orbited" his aircraft, transmitting weather and route information to the pilots of 104 aircraft that flew in rapid succession from the carriers' flight decks.

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[7] The need for two tankers was caused by the fact that in the lighter equatorial air the aircraft required the carriers to make full speed for safe take-off and recovery. The carriers thus greatly increased their fuel consumption.

Without enemy interception these aircraft, which included a torpedo-carrying squadron from *Lexington,* swept across Papua, deluged the enemy ships in the harbours of Lae and Salamaua with bombs and torpedoes, and flew back to land on the carriers with a loss of one pilot and his aircraft. With understandable over-optimism they claimed the sinking of five transports and several warships; later information indicated that one cruiser and three destroyers had been damaged but had not sunk. The Allied blow was a double one for scarcely had the naval aircraft left the target than their place was taken by eight Flying Fortresses which had flown from Townsville. The crews of these aircraft claimed that they had left two ships sinking, four on fire, and one beached. These operations provided the most stimulating day yet experienced in Allied air operations rooms, and news of the attack prompted President Roosevelt to refer to it in a message to Mr Churchill as "the most cheering thing that had happened in the Pacific so far". But, when it was all over, though heavy blows had been struck, the total in Japanese ships sunk was only three—a converted light cruiser, a converted minesweeper and a cargo ship.[8]

Between 23rd February and the end of March, the Flying Fortresses made six raids on Rabaul, four in the Lae-Salamaua area, and one on Koepang. Bad weather and mechanical troubles restricted the weight of these strikes. Most frequently the attacks were against the most difficult of all targets—ships—and most crews lacked the experience needed to achieve accuracy in high-level bombing which, as with the R.A.A.F. attacks, was proving largely ineffective. Claims to having sunk or seriously damaged enemy vessels in high-level attacks were rarely substantiated.

A detailed report of the Japanese landings at Lae and Salamaua and, for about six months thereafter, a daily record of the movement of ships to and from the two harbours and aircraft landing on and taking off from the two aerodromes was available to the Allied Command. Before the Japanese invasion of the north coast of Papua a modest and earnest young Australian named Vial[9] had applied for a commission in the administrative and special duties branch of the R.A.A.F. His application was largely a formality for he had already been "earmarked" for service with the coastwatchers' organisation, the first qualifications for membership of which were courage and integrity.[1] When serving as an assistant

[8] These were the losses acknowledged later by the Joint Army-Navy Assessment Committee which attributed the first two to the carrier aircraft and the cargo ship jointly to the carrier planes and the Flying Fortresses.

[9] F-Lt L. G. Vial, 253939. North-Eastern Area HQ; Coastwatchers and IO RAAF HQ 1942; Offr i/c FELO Port Moresby 1942-43. Assistant District Officer; of Rabaul and Melbourne; b. Camberwell, Vic, 28 Feb 1909. Killed in action 30 Apr 1943.

[1] The coastwatchers provided the paradox of realism originating in idealism and of resolute confidence in the face of defeat. The need for their services was greatest when the military situation was at its worst. Thus their operations were planned with cool deliberation on the assumption of enemy success and in expectation of their remaining in occupied territory to fight on single-handed except for such help as came from friendly natives. Acceptance of this specialised military attitude was well illustrated as early as August 1940 when an observation base was selected in the mountains behind Port Moresby. Here were secreted stores sufficient to maintain the head of the coastwatching organisation, Lieut-Commander Feldt, and 10 native soldiers for three months. Should the Japanese capture Port Moresby Feldt would retire to his mountain base with a teleradio as his main weapon.

district officer in the New Guinea Administration, Vial had acquired a useful knowledge of the geography and ethnography of the territory. Already, in his civil capacity, he had assisted Australians, including members of No. 24 Squadron, to escape from the Japanese at Rabaul. Sent into the hill country round Mubo, overlooking Salamaua and Lae, Vial began to fight the Japanese with radio, grid-maps and binoculars. Aided by two natives who brought him his supplies, he maintained a watching post in the hills. His task was always hazardous, for the enemy soon became aware of his radio transmission and tried vainly, by various means, to find and capture him.[2] His warnings, when quite often no others were being received, saved many lives and much war material from destruction by enemy raids, and they cost the enemy much through the timeliness of the Intelligence they provided for offensive operations by the Allied Air Forces.[3]

Horn Island's freedom from enemy air attack ended on 14th March when 8 Nell heavy bombers and 9 Zeros made a bombing and strafing raid. No. 24 Squadron, still equipped with Wirraways, was based on the aerodrome, but there was a surprise for the raiders when they were intercepted by 9 American Kittyhawks whose pilots, members of No. 49 Fighter Group, were temporarily stationed on the island. The Americans shot down two Zeros and one bomber for the loss of one of their own aircraft destroyed and one damaged. With enemy bases only 200 miles from Port Moresby it was inevitable that Allied aircrews should meet increasing Japanese fighter opposition. Well accustomed to being intercepted to the north of New Guinea, Allied crews were now finding fighters, notably Zeros, in the Port Moresby area, as when Kingwell brought a Hudson back from an attack sortie to find five Zeros waiting to strike as he was about to make his landing approach. The Hudson crew spent 40 minutes in cloud evading the enemy aircraft whose pilots then gave up the chase. On 18th March 9 Zeros were seen circling Horn and Thursday Islands. They made no attack. On the same day 11 more Zeros were sighted over the northern extremity of Cape York Peninsula.

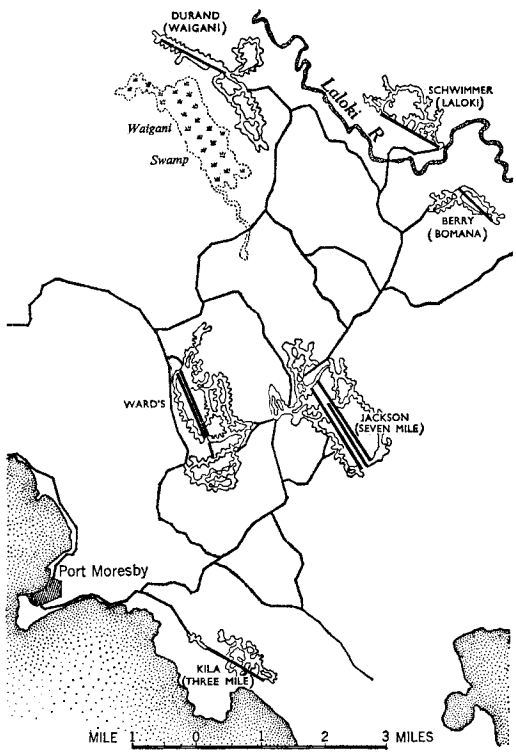
This heavy emphasis on the need for fighter aircraft based on Port Moresby served to quicken consciousness of the garrison's weakness.

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[2] The coastwatching organisation, as its name implied, had as one of its primary functions the reporting of enemy ship movements. The air force, however, attached very special value to its service because the watchers more often than not provided the first and sometimes the only reliable information about the movement of enemy aircraft. Watchers were deliberately posted within sight of key enemy-held aerodromes for that purpose. This added considerably to the danger of detection. The enemy, aware of the proximity of the watcher, would search for him not only with ground patrols but with aircraft which would try to obtain a bearing on his position from the teleradio transmission and then, in low-flying sweeps, rake the plotted area with gunfire in the hope of killing him or forcing him to retire.

[3] After 6 months' service, spent in continuous solitude, but for the visits of the natives who tended him, Vial was withdrawn to Port Moresby. After he had compiled a booklet for Allied aircrew on survival in the jungle, he was appointed officer in charge of the Port Moresby section of Far East Liaison Office, an organisation responsible for psychological warfare and engaged in distributing propaganda. Vial sometimes flew in the aircraft making the leaflet dropping sorties and it was on one such mission in a Liberator in April 1943, that he lost his life when the aircraft crashed into the jungle in the Madang-Wewak area. His body was recovered and buried at Lae. See "Golden Voiced Vial" by H. J. Manning in *Stand-To,* Nov 1958-Jan 1959, for an authoritative account of Vial's experiences as a coastwatcher.

R.A.A.F. Headquarters had been striving since early in January to secure aircraft with which to equip fighter squadrons, and for some time Port Moresby had been first on the list of bases to be so provided. A proposal to send an American squadron to that base in January had been countermanded, as already noted, because of the desperate need of the ABDA Command forces. The immediate objective then was to have three R.A.A.F. fighter squadrons of which one each would be stationed at Port Moresby, Townsville and Sydney. It had been planned that, until these squadrons could be established, three American squadrons would be provided on loan, but American reserves in aircraft and trained pilots were not yet equal to this demand. At the end of February, however, 25 Kittyhawks were made available to the R.A.A.F. and arrangements were made immediately to establish a new fighter squadron. On 4th March No. 75 Squadron was formed at Townsville. Squadron Leader Jeffrey,[4] a highly experienced fighter pilot who had commanded No. 3 Squadron R.A.A.F. in the Middle East, was placed in temporary command to direct the operational training. The Kittyhawks were ferried to Townsville, the first flight encountering bad weather and losing three aircraft in crashes in two of which the pilots were killed.



Such was the urgency of the need that the pilots of the new squadron had only nine days for an intensive course in fighter tactics, gunnery and the principles of fighter control. The advance party of the ground staff had preceded the squadron to Port Moresby, arriving there on the 17th. Two days later Flight Lieutenant J. F. Jackson,[5] another pilot who had served with No. 3 Squadron in the Western Desert, was appointed to

[4] Gp Capt P. Jeffrey, DSO, DFC, 145. Comd 3 Sqn 1940-41; W Ldr 234 Wing RAF 1941; comd RAAF Stn Bankstown, 75 and 76 Sqns, 2 OTU 1942-43, 1944-45, 1 Wing 1943-44. Regular air force offr; of Sydney; b. Tenterfield, NSW, 6 July 1913.

[5] Sqn Ldr J. F. Jackson, DFC, 270493. 3 and 4 Sqns, comd 75 Sqn 1942. Grazier; of St George, Qld; b. Brisbane, 23 Feb 1908. Killed in action 28 Apr 1942. (The Seven Mile Drome at Port Moresby was renamed Jackson's Strip after him.)

command the unit. On the same day (the 19th) 17 Kittyhawks were flown off on their way to Port Moresby, staging by way of Cooktown and Horn Island. Jeffrey led the first flight of 4 without escort and Jackson followed leading the main force of 13. By this time the garrison at Port Moresby had become increasingly sceptical of reports that a fighter squadron would be sent for their protection and none more so than the troops manning the machine-gun posts round the aerodromes. Having now endured 16 enemy raids, these gunners regarded with understandable cynicism the prospect of the arrival of the Kittyhawks they had so often been told to expect. To their cynicism they gave a twist of wry humour by dubbing them the "Tomorrowhawks", "Neverhawks" or "Mythhawks". On the 21st, as Flight Lieutenant Turnbull[6] led his flight of four aircraft at low level in the approach to the runway at the Seven Mile aerodrome, one of these gunners opened fire. Immediately other guns went into action and the firing continued until Turnbull had actually landed and the other three pilots had lowered their under-carriages. Three of the four aircraft were damaged, one of them so severely that it was never flown again, and Jeffrey escaped death by a margin of no more than an inch or two when a bullet ripped through the cushion behind his head.

Of the squadron's twenty-one pilots only four had been in combat. Two—Jackson and Turnbull—had flown against German and Italian aircraft in the Middle East; another, Flight Lieutenant Anderson, was a survivor from the interception of the Japanese attack on Rabaul by Wirraways of No. 24 Squadron, and the fourth, Flying Officer Woods,[7] had served as second pilot of a Hudson operating from Port Moresby. This lack of combat experience was not to last long; in fact, for two of them—Flying Officers Cox[8] and Wackett[9]—no longer than one hour. Within that time a report was received that an enemy bomber was approaching Port Moresby on the routine daily reconnaissance the defenders had come to know well. Cox and Wackett were immediately ordered to intercept. Climbing through cloud they surprised the enemy aircraft at 10,000 feet. Cox made the first attack and put the bomber's port engine out of action. Wackett followed with a starboard attack and put a burst of gunfire into the other engine causing it to lose height rapidly until, at a height of about 500 feet, it exploded and crashed into the sea near the entrance, through the reef, to Port Moresby Harbour. It was a spectacular first "kill" for the squadron and, achieved so soon after their arrival and in full view of the garrison, it did much to raise the defenders' and the squadron's spirits. Wackett and Cox shared the credit equally. Port Moresby radio station "jammed" the bomber's operational frequency

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[6] Sqn Ldr P. St G. Turnbull, DFC, 481. 3 and 75 Sqns; comd 76 Sqn 1942. Regular air force offr; of Glen Innes, NSW; b. Armidale, NSW, 9 Feb 1917. Killed in action 27 Aug 1942.

[7] Sqn Ldr J. Woods, 406064. 23, 75 Sqns, and 9 FSHQ; comd 9 FSHQ 1943. School teacher; of Claremont, WA; b. Boulder City, WA, 10 Dec 1915.

[8] F-Lt B. M. Cox, 260706. 4 and 75 Sqns. Sharebroker's clerk; of Elizabeth Bay, NSW; b. Summer Hill, NSW, 9 Oct 1915. Killed in action 28 Apr 1942.

[9] Sqn Ldr W. L. Wackett, 588. 24, 75 and 31 Sqns. Student; of Melbourne; b. Townsville, Qld, 19 Feb 1921. Killed in action 24 Sep 1944. Son of Sir Lawrence Wackett.

while the interception was made, to prevent the bomber's crew from giving away the secret of the arrival of No. 75 Squadron, and listeners had the satisfaction of hearing the enemy base operator calling in vain for some time after the aircraft had been destroyed.

On the 19th a photographic reconnaissance of Lae had shown 26 aircraft on the aerodrome—fighters and bombers lined up wing-tip to wing-tip along the runway. The photographs also showed a type of bomber—the Betty—that was new to the area. At 6.30 a.m. on the 22nd 9 Kittyhawks took off, 5 of them, piloted by Anderson, Cox, Woods and Flying Officer Piper[1] and the commanding officer (leader), to make a strafing attack on Lae, and four more piloted by Turnbull (leader), with Flight Lieutenant Jackson[2] (a brother of the squadron commander), Wackett and Sergeant Pettett[3] accompanying them to provide top cover. The approach to the target was made after a diversion out over the sea, the attacking aircraft diving through cloud and sweeping over the length of the runway so low that the underside of one wing of Piper's Kittyhawk was damaged through actually striking one of the enemy planes. Since it was clear that the enemy had been completely surprised, Jackson, contrary to accepted strafing tactics, led his flight in again for a second attack, this time through dense smoke rising from burning aircraft. When the attack ended 12 aircraft were burning and 5 others had been damaged.

In the meantime the Kittyhawk pilots giving top cover had encountered three Zeros that had been flying a "standing" patrol at 10,000 feet. Wackett evaded these and dived to attack one of another formation of Zeros that were engaging the Kittyhawks that had strafed the aerodrome. As he made a beam attack one of Wackett's guns failed, and he broke away, but his engine had been hit by a burst of fire from the enemy aircraft. He dived into cloud and, as he emerged, he saw two Zeros crash in flames into the sea.[4] When his engine failed completely, Wackett put his aircraft down on the sea about 10 miles from the shore and about midway between Lae and Salamaua. Freeing himself from the cockpit and inflating his "Mae West" life-jacket he began to swim towards the shore. He saw several sharks but avoided attracting their attention by lying quite still in the water. After about nine hours he reached the beach near a native village. Here he waited, almost exhausted, while the natives decided what they would do with him. Two natives, one of whom could speak pidgin English, then undertook to guide him to safety, Wackett learning later through an interpreter that the tribe, to which these two natives did not belong, fearing reprisals, had intended to hand

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[1] F-Lt J. W. W. Piper, DFC, 250828. 24 and 75 Sqns. Controller 2 FSHQ 1942-43; 9 Ops Gp 1943; Intell duties RAAF comd 1943-45. Salesman; of Darriman, Vic; b. Armadale, Vic, 7 May 1917.

[2] W Cdr L. D. Jackson, DFC, 270520. 453, 23 and 75 Sqns; comd 75 Sqn 1942; Wing Leader 75, 78 and 80 Sqns 1943-44; CFI 8 OTU and comd ADHQ Madang 1945. Garage proprietor; of Surat, Qld; b. Brisbane, 24 Feb 1917.

[3] F-Lt J. H. S. Pettett, 403372. 23 and 75 Sqns. 9 Mobile Fighter Sector 1942-43; AO 2 OTU 1943-45. Radio technician; of Coogee, NSW; b. Chatswood, NSW, 31 Oct 1917.

[4] Credit for shooting down one each of these aircraft was given to Turnbull and Pettett.

him over to the Japanese. Bare-footed, he tramped through jungle and swamps, waded up streams, and climbed steep hillsides. After four days he reached Bulwa where members of the New Guinea Volunteer Rifles cared for him until he had recuperated sufficiently to continue his journey from Wau through Bulldog to Yule Island and eventually to Port Moresby. He had crossed Papua from the north to the south coast, covering most of the distance on foot.

In the course of the battle over Lae Flight Lieutenant Anderson, who was seen turning in to attack a Zero, was caught by the enemy's fire. He failed to return and was later posted as missing. The other Kittyhawk pilots returned safely. Their first attack on an enemy base had resulted in the destruction of 14 enemy aircraft—9 fighters and 3 bombers on the ground and 2 fighters in combat. Their losses were one of their comrades and 2 of their aircraft. Later on the same day 3 Kittyhawks were lost in a series of accidents—2 on take-off and one in landing.

Two Hudsons of No. 32 Squadron followed the Kittyhawks in to attack Lae but the bombs from one fell into the sea short of the target and those of the other could not be released owing to a mechanical fault. The crew of the first Hudson, piloted by Flight Lieutenant McDonnell, shot down a Zero after a combat in which two of their number were wounded and their aircraft damaged by the Zero's gunfire. The second Hudson, piloted by Flying Officer Hermes, was also damaged in combat with a Zero which was seen going down with smoke pouring from its engine. Four Flying Fortresses from Townsville completed the day's attacks on Lae by blowing up an ammunition dump, destroying an aircraft on the ground with a direct bomb hit and setting fire to another. The total number of enemy aircraft destroyed that day was 17, and 6 were damaged.

Next day the Japanese retaliated with their seventeenth raid on Port Moresby. About noon 19 bombers approached at high altitude and, though all available Kittyhawks were flown off to intercept, they were unable to gain sufficient altitude. The bombs fell near the runway causing little damage. Four Zeros then made a low-level attack destroying two Kittyhawks which had bogged near the runway as their pilots attempted to get them airborne. A third Kittyhawk was damaged. One of the Zeros, the pilot of which dared a second run over the aerodrome, was caught by machine-gun fire from the ground and crashed into a low hill near the aerodrome. Another Zero was damaged by ground fire and probably failed to get back to its base. On the 24th Piper shot down a lone enemy bomber over the sea south of Port Moresby, and, later in the day, when four Kittyhawks intercepted a formation of 18 bombers approaching Port Moresby, Flight Lieutenant Jackson shot down one of 3 escorting Zeros. No damage resulted from the raid and one of the bombers was hit by anti-aircraft fire and probably was lost.

Having seen the squadron so quickly established as a fighting unit, Jeffrey was transferred to the mainland leaving Squadron Leader Jackson,

already affectionately known to the pilots as "Old John", to carry the full operational and administrative burden of his appointment. The camp at the Seven Mile aerodrome was dispersed and camouflaged in a wide area of scrubby timber some distance from the runway. When not on strike sorties or squadron operations the pilots remained close to their aircraft, sharing in keeping a standing patrol over the base and ready to "scramble" when enemy aircraft were reported to be approaching.

The raid warning system at this time was elementary. A single radar direction-finding station (No. 29) had been in operation since the middle of the month, but its value was extremely limited, for the mountainous background to the base made reception from the north almost impossible and restricted its field to surveillance out to sea. Of the extensive observer-post system planned, only one section was then operating—that on the 100-miles radius, with 20 posts in the Owen Stanley Mountains. Sometimes the warning came too late to give the fighters time to gain sufficient altitude for interception, and there was, as yet, no fighter sector control. Living conditions were hard. Unvaried service rations, no amenities, total blackout every night, and a tropical climate soon combined to affect the health of the unit. On the aerodrome there was practically no "hard standing" for the aircraft, which frequently bogged in the rain-sodden ground. A section at one end of the runway, 400 yards long, was still being formed. This called for much caution in landing and taking off and, with inexperienced pilots, was the cause of accidents in which aircraft were damaged and sometimes completely wrecked.

Almost immediately, serviceability became a problem, for after only three days of operations 7 of the original 17 Kittyhawks had been destroyed, and thereafter it was a continuing struggle, with few facilities, to maintain an effective striking force. Yet the squadron had already laid the foundation for an excellent reputation in combat and its morale was strong. When North-Eastern Area Headquarters proposed that it should return to the Australian mainland, Squadron Leader Jackson, strongly supported by Wing Commander Pearce, R.A.A.F. operations officer at Port Moresby, protested emphatically and the unit remained to fight on. On 30th March the first replacement aircraft arrived—five Kittyhawks, one of which crashed on landing and was seriously damaged.

On the last day of March No. 32 Squadron had only one Hudson available at Port Moresby when a reconnaissance over Salamaua was called for. The aircraft was reported as unserviceable and, when told that the need for the flight was imperative, Kingwell insisted on flying it himself. The pilot originally selected, Flying Officer Green, insisted on accompanying him. As they completed their photographic run over the target three Zeros attacked almost simultaneously. The Hudson's gunner shot one of the Zeros down, possibly shot down a second and Kingwell possibly shot down the third with the front guns. When the attack ended 12 minutes later Kingwell had been injured by splinters of glass in his

eyes, Green had received bullet wounds in the left wrist and both thighs, and one of the air gunners, Sergeant Townshend,[5] had been wounded in one foot. The Hudson returned and made a safe landing.[6]

Though many of the problems that confronted the Allied command early in March were common to both the North-Eastern and the North-Western Areas, there were distinctions that made the task at Darwin seem even more difficult than the one at Port Moresby. The devastation caused by the Japanese air raids on Darwin on 19th February had almost completely disorganised the equipment of the port. It had also caused such wide dispersal of the meagre air forces available that operational and administrative control had been separated, communications deranged, and maintenance, supply and construction work disrupted. To defend Darwin there were virtually no naval forces, about two-thirds of a division of infantry, two war-worn Hudson squadrons (Nos. 2 and 13), No. 12 Squadron with its Wirraways, and the nucleus of two American squadrons of Dauntless dive bombers which, like the Wirraways, were in need of reconditioning.

To protect seaborne supply services and keep the port open for light naval forces, it was estimated that 10 air squadrons were needed.[7] The emphasis was on fighters. The Darwin Defence Committee had reported to the Central War Room on 26th February that "in view of the serious lack of air support for ground troops, every effort should be made to provide adequate fighter defence". Aircraft capable of reconnaissance and flights to Ambon and Kendari were also sought. The Australian Chiefs of Staff and the senior American staff officers, at a joint meeting on 6th March, had agreed that construction of aircraft dispersal areas in the vicinity of Darwin should be given first priority, the Australian Air Staff having strongly recommended the formation of a works squadron from trainees waiting to be called up. General control of all works in the area was centralised under the Director of Allied Works, Mr E. G. Theodore, and, while much improvement was hoped for, the limit to what could be achieved was set by the capacity of vehicles operating along the trans-continental road from the railhead at Alice Springs.

As hope of any effective Allied resistance in Java faded, the port of Broome, on the north-west coast of Australia, had attained unexpected importance. With a harbour that provided a sheltered alighting area for flying-boats and an aerodrome which, with the aid of 180 native labourers,

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[5] F-O J. V. Townshend, 406041. 14, 32, 36, 34 and 35 Sqns. Clerk; of Bassendean, WA; b. Newquay, Cornwall, Eng, 16 Oct 1916.

[6] Examination of the biographical footnotes in this volume will give some idea of the parsimony with which decorations were awarded to members of the RAAF in the South-West Pacific. It should be taken into account that a considerable number of the decorations shown in this chapter, for example, were won overseas in 1940-41 by men whose service against great odds in the SWPA received no further recognition.

[7] Interceptor fighter, 2; long range fighter, 1; dive bomber, 2; general reconnaissance (torpedo bomber), general reconnaissance (flying-boat), heavy bomber, army cooperation and transport, one each.

was maintained to take even heavy bombers like the Fortresses and Liberators, it was the most suitable staging point and refuelling base on the evacuation route from the south coast of Java. As such it had become a clearing station for thousands of refugees from the Netherlands East Indies and for those unarmed members of the Allied fighting Services for whom air transport could be provided. The final point of embarkation was Tjilatjap from which, at the end of February, flying-boats of the Royal Netherlands Air Force, Qantas and the R.A.A.F. were operating shuttle services to Perth. As the situation in Java became more and more critical, every aircraft available that could carry passengers over the route was brought into service and the once sleepy pearling port was transformed temporarily into one of the busiest air ports in the South-West Pacific. As many as 57 aircraft arrived at Broome in one day, and in 14 days between 7,000 and 8,000 passengers passed through the base. The strain on aircrew was severe, some of them remaining on the ground only to eat a hurried meal and make ready for take-off again as soon as their aircraft had been refuelled; one pilot even recorded 84 hours' duty without rest.

In the alighting area on the harbour there were moorings for only three flying-boats; for the rest they anchored or, as with the big Dutch Dorniers, lay on the sea-bed when the tide was low. Apart from the Qantas service which alone provided ferry craft to carry passengers to and from the shore and which had a small shore-based staff working under the direction of Captain Brain, there were no organised servicing facilities beyond the single refuelling lighter *Nicol Bay,* whose master, Captain H. Mathieson, had to rely on the flying-boat captains coming ashore and asking him for fuel. Broome's three hotels, most of the private homes, and even the school, which had been turned into messing quarters, were crowded by travellers who had to be fed and given temporary shelter. Many flying-boat passengers remained on board while their aircraft were being refuelled. In an effort to relieve the strain on the port's accommodation, an intermediate air service from Broome to Port Hedland was also operated; wounded, sick, and women and children passengers being given priority in the aircraft that operated through to Perth.

News that the Japanese invasion of Java was very near was brought to Broome on 27th February by Captain Ambrose,[8] when he flew the Qantas flying-boat *Coriolanus* in from Tjilatjap. Another pilot, Captain Denny, then took the aircraft off on what was to be the last of the Qantas shuttle services. Soon after this flight began an order was received from the Department of Civil Aviation, which had assumed control of the civil flying services, recalling all aircraft in flight westward of Broome. Denny therefore turned back. A radio message from Tjilatjap reported that two other Qantas flying-boats—*Circe,* commanded by Captain

[8] F-Lt L. R. Ambrose, 1392. Qantas Merchant Air Service 1940-45. Commercial pilot; of Sydney; b. Melbourne, 12 Jul 1906.

Purton,[9] and *Corinthian,* by Captain Howard[1]—were on their way to Broome. In his diary for that day Brain included these notes:

> I shall not be surprised if all this activity brings an enemy raid. . . . I shall arrange to get our machines out of here as quickly as possible. Captain Howard in *Corinthian* has just arrived. . . . Purton has not shown up . . . the two machines departed within a few minutes of each other and should have been within radio contact throughout the trip. This news is ominous.[2]

Meanwhile Broome radio had been receiving distress signals from an American DC-3 that had left Perth on the 26th and, failing to find Broome in the darkness, had crash-landed on a beach. The aircraft had been wrecked but the crew were safe and the aircraft's radio could still be operated. *Corinthian* left for Sydney by way of Darwin, Denny having been instructed to search the coast for the missing American aircraft on his way to Darwin. He found the crew near Cape Londonderry, about 400 miles north of Broome. A search for the missing flying-boat *Circe* was made for about 500 miles to seaward on the Tjilatjap route by Captains Thomas[3] and Ambrose in *Corinna* without result. Captain Purton and his aircraft were never seen again. Another Qantas flying-boat, the *Camilla,* commanded by Captain Sims, was at Wyndham en route to Broome on 2nd March when the Broome radio station received a report that the coastal steamer *Koolama* with 25 passengers, mainly waterside workers on their way to Darwin, had gone ashore to the west of Wyndham after having been bombed by enemy aircraft. Sims therefore broke his journey to Broome to pick up these passengers. Brain was now so conscious of the likelihood of an air raid that he sought to avoid having in port more than one of the company's flying-boats at a time. Sims therefore was advised not to return to Broome before 11 a.m. on 3rd March by which time the *Corinna* should have taken off for Sydney.

About 3 p.m. on 2nd March a Japanese reconnaissance aircraft appeared, made three circuits over the port at 9,000 feet and then disappeared. There were then three flying-boats moored in the harbour. Four more alighted just before dusk and nine others arrived at intervals through the night, which meant that at dawn there were 16 flying-boats moored or anchored within an area of water about one mile and a half long by three-quarters of a mile wide. The enemy reconnaissance on the previous afternoon had an obvious significance and the captains of all aircraft were warned to take off as soon after day-break as possible. Captain Mathieson and his crew in the lighter had toiled through the night refuelling three Dornier flying-boats, but the warning was not heeded by the captains of those aircraft ready for flight and only a float-plane had taken off when, about 9.20 a.m., enemy fighters swept in over

[9] F-Lt W. B. Purton, 296. 11 and 20 Sqns and Qantas Merchant Air Service. Commercial pilot; of Sydney; b. Hobart. 15 Nov 1912. Killed in action 27 Feb 1942.

[1] F-Lt S. K. Howard, 266981. Qantas Merchant Air Service 1939-45. Commercial pilot; of Bundaberg, Qld; b. Bundaberg, 20 Jul 1902.

[2] E. Bennett Bremner, *Front-Line Airline* (1944), p. 90. Where it concerns civil flying-boat operations this account is largely based on this book.

[3] F-Lt O. F. Y. Thomas, 266997. Qantas Merchant Air Service. Commercial pilot; of Sydney; b. 26 May 1909. Lost while flying west of Cocos Island 23 Mar 1946.

the harbour entrance to attack from low level.[4] The raiding force probably consisted of nine Zeros, three of which circled overhead to give top cover —needlessly, as it happened—while the other six, flying in line-ahead formation, came in at a height of about 500 feet. The first indication of the raid was a burst of gunfire from the leading Zero which chose a R.A.A.F. Empire flying-boat as its first target. The captain, Flight Lieutenant Caldwell,[5] and the second pilot were ashore at the time and the rest of the crew were in the spar compartment. As explosive bullets tore through their aircraft, Corporal Ireland[6] rushed to the flight deck, released the rubber dinghy and jumped with it into the sea. The other crew members dived overboard and joined Ireland who had succeeded in inflating the dinghy and all escaped from the flying-boat without injury just as it burst into flames. By this time other flying-boats were either blazing at their moorings or sinking. The R.A.A.F. crew went to the aid of survivors from one of the Dutch aircraft and eventually reached the beach with thirteen in their dinghy, the normal capacity of which was five.

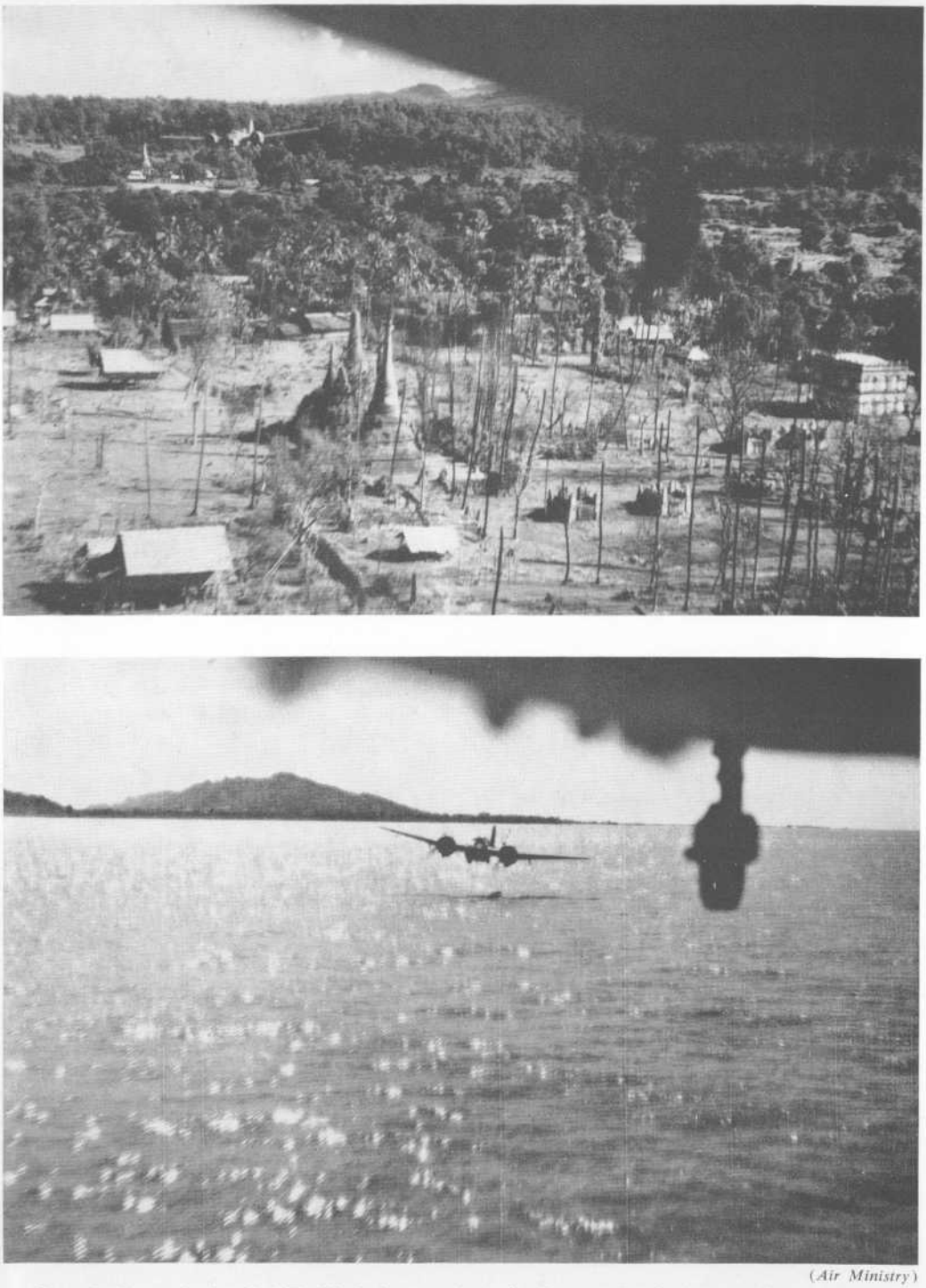
As the Zeros attacked, Captain Mathieson had just begun to refuel the Qantas flying-boat *Corinna* whose commander, Captain Ambrose, was ashore making final flight arrangements. Mathieson immediately cut the lighter free and pushed off and, though this was only the second flying-boat to be attacked, his vessel, with 180 drums of petrol on board, was not hit. His subsequent efforts to rescue survivors from the sea were not welcomed because of his dangerous cargo. Brain, hearing the gunfire, had run to the beach where he tried to drag a rowing-boat into the water. Weak from attacks of fever he failed until joined by Mr Malcolm Millar, a representative of the Qantas and B.O.A.C. general agents in Singapore, who had been supervising flying-boat operations from Malaya and later Java. Millar had been evacuated from Java by an American Fortress which had arrived that morning. Together he and Brain rowed out and rescued two Dutchmen who were supporting a young woman who was in a state of collapse, then a man who was holding the rescued woman's baby, and finally a Dutch boy and four men who were trying to swim ashore. By this time all the flying-boats had been attacked. By good chance the 25 passengers of the *Corinna* were still on the wharf. The Japanese pilots spared them and made no attempt to attack those who had leaped from the flying-boats into the harbour. The crew of the Qantas flying-boat, diving into the water, found an empty dinghy that had been cast loose from a lugger and with it rescued as many people from the sea as the boat would hold. Seven planes were on the aerodrome when the attack began, including two Flying Fortresses and two Liberators, one of which took off only to be shot down into the

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[4] This aircraft was from USS *Houston*. When the cruiser was engaged in her last battle the pilot of the float-plane was ordered to fly to the nearest Australian port. He reached Broome with practically no fuel left in the tanks.

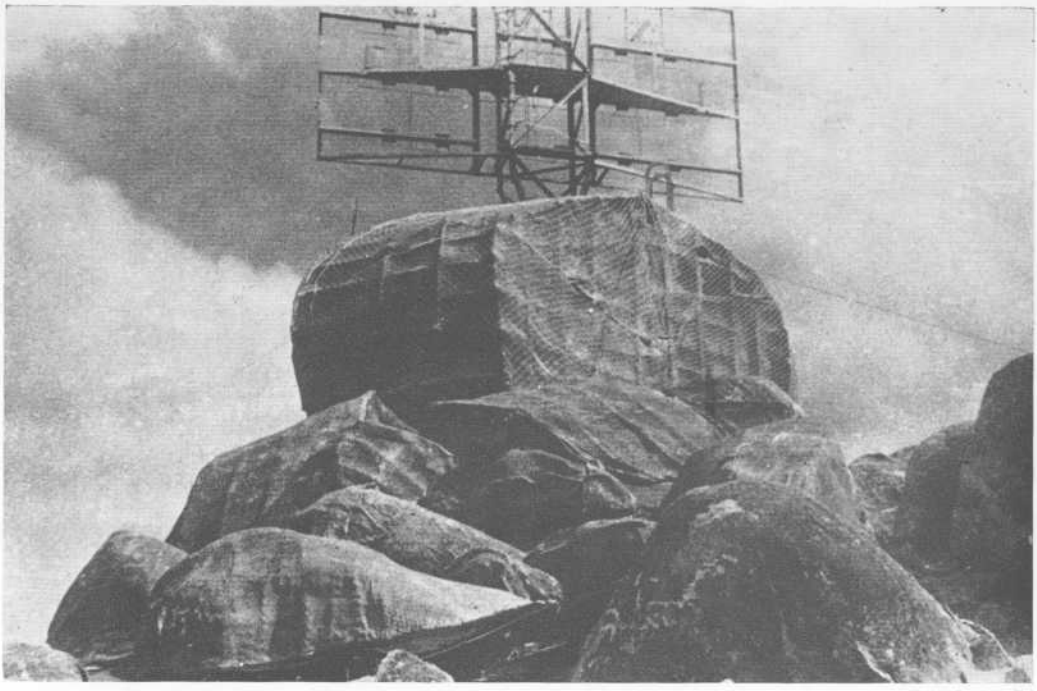
[5] Sqn Ldr K. G. Caldwell, 261491. 11, 20, 33 and 41 Sqns; Controller HQ Eastern Area 1943. Commercial pilot; of Roseville, NSW; b. 22 Jul 1911.

[6] W-O A. B. Ireland, BEM, 6686. 11 Sqn, HQ Port Moresby and 33 Sqn. Electrical apprentice; of Sydney; b. St Andrews, Scotland, 17 Dec 1920.



(*Air Ministry*)

Low level attacks by R.A.F. Blenheim squadrons in Burma. In the upper photograph an aircraft of No. 34 Squadron is seen coming in to bomb a ground target on 20th October 1942. In the lower photograph an aircraft of No. 60 Squadron is levelling out for the "run in" to make a mast-head attack on a Japanese coaster off Akyab on 10th November 1942. A sprinkling of R.A.A.F. men served on both these squadrons.



(R.A.A.F.)

A radar station on the north Queensland coast camouflaged to look like the rocks among which it had been installed.



(R.A.A.F.)

A concentration of bombs falling on Japanese shipping in Rabaul Harbour on 12th August 1942.

sea in flames. Of 33 men in the aircraft only one, an American army sergeant, survived; he returned to Broome after having been in the sea for more than 30 hours. A companion, the only other man to survive the crash, was drowned when he was overcome by exhaustion.

Only 15 minutes after their first assault over the harbour, the raiders had wrecked every flying-boat, swept the aerodrome and destroyed every aircraft on it, shot down the one land plane that took off, and set course for the return flight to their base. When about 60 miles north of Broome they met a Dutch DC-3, one of the last Allied aircraft to leave Java, which happened to be carrying a valuable consignment of diamonds. The Zeros promptly shot it down into the sea. There were no survivors. The only retaliation against the Japanese attack came from a Dutch gunner who had taken a machine-gun from its mountings in an aircraft for repair. Supporting the barrel on one forearm he kept firing while the enemy aircraft were within range and, though his arm was severely burned, he was credited with having probably shot down one of the Zeros. The exact number of casualties from the raid has never been determined. The evacuation of civilians from Java was conducted with inevitable haste and later, in the war cemetery at Broome, the graves of 29 unidentified victims of the raid gave solemn proof of the absence of records listing the names of the passengers embarked in Java. It has been estimated that 70 people lost their lives, including those killed when the Liberator was shot down. Twenty-four aircraft were destroyed by the raiders. Of these 16 were lost on the harbour (2 Empire flying-boats, 3 Dutch Dorniers, 2 British and 2 American Catalinas and 7 other flying-boats); 6 were destroyed on the aerodrome (2 Fortresses, one Liberator, one R.A.A.F. and one Dutch Hudson and one Dutch DC-3); and 2 aircraft were shot down (one Liberator and one DC-3).

When the raid was over there was much confusion in the town and, as at Darwin, the impression that the raid was but a preliminary to invasion, spread rapidly. Someone started a rumour that the immediate evacuation of the town had been ordered, and, since no aircraft or ships were available, the trucks and cars owned by a company which had a contract for aerodrome construction work were used to form a land convoy. This convoy set off on the long southward journey over desert country but returned a few days later being unable to proceed because of the boggy condition of the roads. An American-manned Liberator landed from Perth with doctors and medical supplies. When taking off again this aircraft left the runway and the undercarriage was damaged. So strong was the fear of invasion that no attempt was made to repair the aircraft and it was destroyed on the assumption that it would otherwise be left to the enemy. Smoke from a ship far out at sea was immediately and wrongly taken as the first sign of the approach of an enemy invasion fleet. With an understandable fear of further raids, the staunch members of the community, who had no intention of evacuating at least at this stage, moved out of the town each morning as a safety precaution, the reasoning

being that the flight distance to be traversed by enemy aircraft was such that they would attack before midday and so leave themselves time to return to base before nightfall. Demands to the authorities for means of evacuation, troops for the defence of the port, and even for a declaration of martial law became insistent. Plans were made for the demolition of the aerodromes at Broome, Wyndham, Port Hedland, Derby and Drysdale, but the Air Board acted promptly and prevented any such action. For two weeks after the raid tension remained high, but when no further attack came and there was no sign of an invasion the town returned to a more normal state.

The first Qantas flying-boat to alight on Broome Harbour after the raid was *Camilla,* piloted by Sims who, since all the mooring buoys had been destroyed, anchored off the jetty. Only an hour had passed since the "all clear" had been given and Brain, wary of further attacks, told Sims to leave immediately for Port Hedland. Once there Sims had to wait for the full flood tide so that he could taxi up to the jetty for refuelling by the primitive method of rolling drums out along the wharf and emptying them one by one with a hand pump. The tide was not full until 2 a.m., but the risky and difficult manoeuvre was performed safely and the flying-boat was warped out into clear water again with only the moon for light. When Sims brought *Camilla* back to Broome next day the senior American officer, Lieut-Colonel Richard A. Legg, who was directing the removal by air of all American servicemen who had been flown from Java, asked that he should make a search along the coast for survivors of the Liberator that had been shot down. But Sims had instructions to transport to Perth wounded who had been moved for safety to Port Hedland; and Brain, Flight Lieutenant Smith[7] (a R.A.A.F. medical officer) and three other volunteers undertook to make the search in a launch. After a dangerous and exhausting trip in which the launch, not intended for use on the open ocean, was saved from foundering in a heavy sea only by heaving spare drums of fuel overboard and bailing continuously, the party returned without having found any survivors. Aircraft wreckage, life-jackets, charred cushions and portions of burned clothing found on the beach provided grim evidence of the reason for the failure of their mission.

Almost simultaneously with the raid on Broome eight enemy fighters had attacked Wyndham, setting a petrol dump on fire and destroying a light aircraft on the ground. The steamer *Koolama,* from which Sims had picked up the passengers, had been brought alongside the Wyndham wharf. Seven hours after the raid the ship sank at her berth and while the raiders may have been responsible, it was more probably the result of damage inflicted on her in the original bombing attack.

As an outcome of the first raids on Darwin steps were taken to disperse the area and station headquarters, hitherto concentrated at R.A.A.F. Station, Darwin. On 28th February area headquarters moved to a site in

[7] Sqn Ldr W. H. Smith, 253443. HQ North-Western Area 1942; 11 EFTS 1942-43; 32 and 6 Sqns 1943-45. Medical practitioner; of Melbourne; b. Melbourne, 2 Jul 1916.

the bush about a mile and a half south of the station, and on 3rd March the administrative staffs moved to Birdum to establish a rear headquarters. Next day forward headquarters moved back to a camp at the "22 Mile".

Darwin was raided again on 4th March when eight Zeros made a low-level attack on the R.A.A.F. aerodrome. A Hudson about to take off on patrol was destroyed but there were no casualties. The raid was more in the nature of an armed reconnaissance. Such operations became increasingly frequent in the next few weeks at all the coastal bases from Broome to Darwin. On the 10th ten fighters appeared over Darwin, but there was no attack and four days later reconnaissance aircraft were sighted as far south as Daly Waters. On the 16th there was a determined air attack on Darwin by 14 bombers in which two R.A.A.F. ground staff were killed and eight others and an American serviceman were wounded. Materially the raiders achieved only a direct bomb hit on the kitchen of the officers' mess and slight damage to one Hudson. Three days later seven aircraft bombed the residential area in Darwin and the naval headquarters. There were nine casualties, two of which were fatal. Then, on the 17th, No. 9 Squadron, the first of three squadrons, of No. 49 American Fighter Group, reached Darwin.[8] The group was commanded by an experienced and forceful officer, Lieut-Colonel Paul B. Wurtsmith. This first step towards adequate air defence of Darwin was supplemented by the first Australian-built radar direction finding unit and a somewhat rudimentary fighter sector (No. 5) which was installed about one mile from the R.A.A.F. aerodrome.[9] On the 18th Batchelor became a R.A.A.F. station with No. 12 Squadron based there with their Wirraways, while all ground staff of 2 and 13 Squadrons but those essential for servicing and operations were moved from Darwin to Daly Waters. This move entailed many physical difficulties. Conditions were as yet primitive and unhygienic, and spares and equipment scarce. These disabilities had to be endured until roads, adequate accommodation and sanitation had been provided, but though improvements were made the site remained a poor one.[10]

Indeed the move to Daly Waters seriously affected the efficiency and morale of the force. It separated the commanders and aircrews from the ground staffs, since most of the aircrews remained in the Darwin area about 300 miles away. The ground staff had to live in uncomfortable conditions, and had to carry out major servicing and repairs with the aircraft in the shade of gum trees. Important items of technical equipment had to be left in the open. Meanwhile all maintenance stores remained at Darwin and there also were the workshops.

However, order was being gradually restored and the greatest stimulant for restoration of morale was the sight of the American fighter aircraft patrolling the skies above.

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[8] The other two units—Nos. 7 and 8 Squadrons—reached Darwin on 6th and 15th April respectively.

[9] The story of the development of radar in Australia is told in D. P. Mellor, *The Role of Science and Industry* (1958), Vol V in the civil series of this history, pp. 423-52.

[10] Later in the year this site was abandoned as totally unsuitable for an air force station.

CHAPTER 24

COMMAND AND SUPPLY

GENERAL Brett had again become one of the central military figures in Australia at the end of February when, on the eve of the dissolution of ABDA Command, he had resumed the role of Commanding General, United States Army Forces in Australia (USAFIA).[1] His first task was to reorganise these forces and prepare them for combat and to do everything possible to strengthen the defences of the Commonwealth. He is quoted as saying at this time that it was necessary to build up the defence of Australia to make it "a second England", and he had already ordered radio direction finding equipment, anti-aircraft guns and even barrage balloons.[2] In the light of the enemy's capacity to divert their strong carrier forces to attack almost any part of the Australian coastline, his plan was to base air units at Darwin, Townsville, Brisbane, Sydney, Melbourne, Adelaide and Perth; he would need, he estimated, a strength of 3 groups of heavy bombers (each of 4 squadrons), 3 of medium and 3 of light bombers; 6 groups of fighter aircraft and 3 of transport aircraft, plus 2 air depot groups and 2 aviation engineer battalions. But there were allocated to him only 2 groups of heavy, 2 of medium and one of light bombers, and 3 groups of fighters.

The American aircraft actually available were either survivors from Java or in units not yet fully organised. The transport *Abbekerk* had reached Fremantle on 5th March after a hazardous voyage from Tjilatjap with some of the ground staffs of Nos. 7 and 19 Bombardment Groups. Less than a fortnight later these two groups were reorganised as one—No. 19—with 14 Flying Fortresses that had been able to fly into Broome from Java, plus the ground echelons that had come by sea. This group also absorbed the 12 Fortresses from the former naval task force that had been operating from Townsville under R.A.A.F. control.[3] A second heavy bombardment group, No. 43, had been allotted for service in Australia and its ground staff had already arrived, but a long wait for their aircraft was inevitable.[4] The plan for the delivery of Fortresses had been fixed at two a day after 20th March, so that the two groups of heavy bombers could be built up to, and maintained at, 40 aircraft each. But a revision of the allocation of aircraft to all theatres led to curtailment and only 9

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[1] Maj-Gen Barnes, who had succeeded to this post when Brett was appointed to ABDA Command, became his deputy.

[2] Office of the Chief Engineer, GHQ Army Forces Pacific, *Airfield and Base Development* (1951), p. 3, Vol VI in the series *Engineers of the Southwest Pacific 1941-1945.*

[3] On 18th March 1942 American units in Australia had in commission only 39 bombers (12 heavy and 27 dive bombers) and 177 fighters comprising 85 Airacobras (33 P-39's and 52 P-400's—a lighter-armed version of the P-39) and 92 Kittyhawks. The fighter strength was all that remained of more than 527 that had reached Australia between 23rd December 1941 and 18th March 1942. Most of the aircraft were in need of repair and most of the bomber crews in urgent need of rest.

[4] The aircraft were not received until September 1942. Craven and Cate, *The Army Air Forces in World War II,* Vol I, p. 526*n*.

had reached Australia by the end of March and only 30 were listed for delivery in April. The rest were to follow "as soon thereafter as was possible".[5]

The supply position for medium and light bombers was much the same. No. 3 (Light) Bombardment Group—both aircrews and ground staff—had arrived in Australia and two of its four squadrons (Nos. 13 and 90) were allotted Mitchell medium bombers which had been intended for Dutch units. No. 89 Squadron, while awaiting the arrival of A-20 (Boston) light bombers, were engaged in service and maintenance work on No. 19 Group's Fortresses at Charters Towers. The group's fourth squadron (No. 8) was equipped with 27 Dauntless dive bombers which had been maintaining patrols in the Darwin area, flown by those members of No. 27 Group who had escaped from the Philippines. These experienced airmen were now appointed to key posts in No. 3 Group. Two medium bomber groups had also been assigned to Brett's command—Nos. 38 and 22. The ground staff of No. 38 had arrived on 25th February but, since they had no aircraft, their lot, while waiting, was aircraft assembly for other units and training in infantry tactics. No. 22 received aircraft in March —48 Marauder medium bombers.

The R.A.A.F., still with its small but solid core of experienced operational squadrons—notably (early in March) Nos. 11, 20 and 32 in the New Guinea area; Nos. 2 and 13 in North-Western Area—also had plans, some of which were on the point of achievement. However, a big change for both the U.S.A.A.F. and R.A.A.F. organisations in Australia was being planned at the highest level.

Since the Japanese had shattered the Malay Barrier and interposed their strong forces between the China-Burma-India theatre and the South-West Pacific theatre, the Allies had been set a new problem in organisation and command; a problem that had been receiving very close examination by the American President, the Combined Chiefs of Staff and the American Joint Chiefs of Staff. By 9th March the Joint Chiefs of Staff had worked out a plan whereby the Pacific theatre would be divided into the South-West Pacific Area and the Pacific Ocean Area.[6] Already President Roosevelt had decided to seek the acceptance of General MacArthur as Supreme Commander of the armed forces of the Governments whose formations were operating in the South-West Pacific; Admiral Nimitz was to be appointed Commander-in-Chief, Pacific Ocean Areas.[7]

Plans were made for the prompt transfer of MacArthur to Australia. Four Fortresses were dispatched for Mindanao, but only one succeeded in reaching its destination and it was in bad mechanical condition. Major Carmichael was then instructed to prepare more aircraft for the task and three, borrowed from the navy, reached Mindanao safely, carrying with

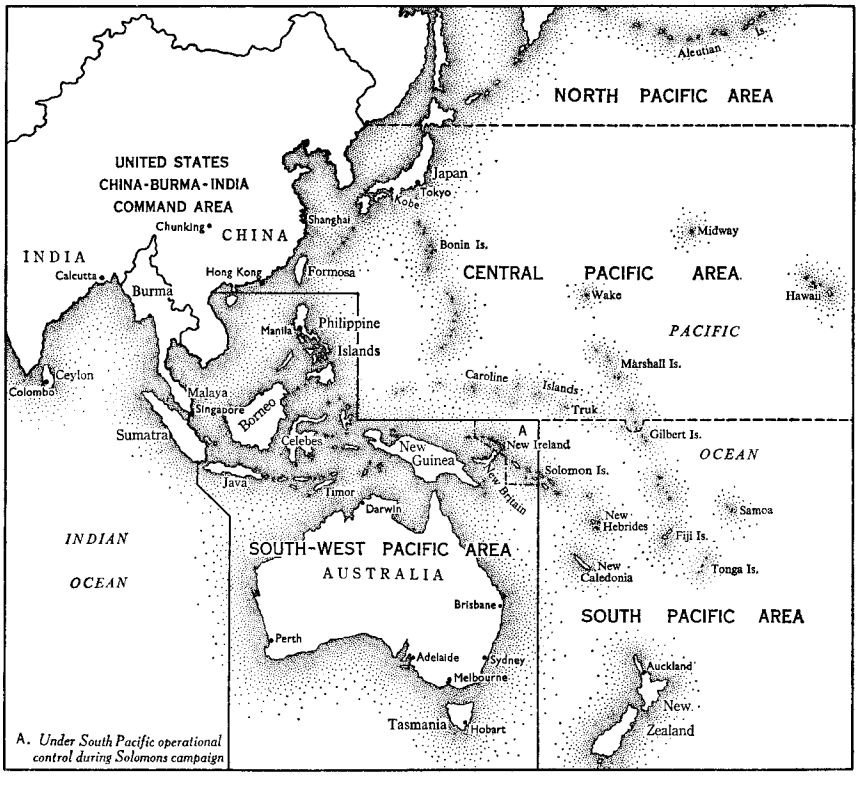
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[5] Craven and Cate, p. 413.

[6] The Pacific Ocean Area was sub-divided into three subordinate areas—North, Central and South Pacific.

[7] The Governments concerned were those of Australia, New Zealand, the United Kingdom, the United States, and Holland.

them a consignment of much-needed medical supplies for the forces on Bataan. Meanwhile on a rainy evening (11th March) the general, his wife and young son and several staff officers, including General Harold H. George, boarded two patrol boats which, following separate courses, made the journey from Manila Bay to a rendezvous on Mindanao with all speed and without incident. For the next stage of the journey a night



The Pacific Theatre

take-off was arranged from Del Monte aerodrome, no great distance from the enemy's base at Davao. The Flying Fortresses landed at Batchelor on 17th March. From Darwin the party made its way by road to Alice Springs and thence to Melbourne by train—a journey that occupied three days and a half. On the 17th General Brett had informed Mr Curtin of MacArthur's arrival and added that the United States President would be pleased if the Australian Government were to nominate MacArthur as Supreme Commander of all Allied Forces in the South-West Pacific. The nomination should be submitted simultaneously to London and Washington. That day the War Cabinet agreed that Curtin should do this, and the nomination was approved.

MacArthur immediately began preparing for the establishment of his new command. The area for which he was to be responsible was vast: it included, from the north, the Philippine Islands; the South China Sea—the boundary of the area on the west being the coastline of French Indo-China, Thailand and the Malay Peninsula and therefore including the waters of the Gulf of Siam; the whole of Borneo and the Netherlands East Indies, except Sumatra; New Guinea, New Britain and the western "half" of the Solomon Islands group; Australia, and the waters directly to the south of the continent. In relation to the task he had been given, MacArthur had serious misgivings about his forces. In a message to General Marshall, Chief of Staff of the United States Army, he expressed the opinion that none of his forces was adequate. Without a carrier his naval forces would be limited to minor operations; except for two divisions of the A.I.F. (one of reduced strength), his ground forces were inadequately trained; and through lack of organisation and training his air forces would need at least four months of intensive effort to reach a satisfactory condition.[8]

On 17th April the Australian War Cabinet, on the recommendation of the Chiefs of Staff, approved the assignment to the S.W.P.A. Command of all combat sections of the Australian Defence Forces, and on the 18th General MacArthur formally assumed his new appointment and issued General Order No. 1, which formally constituted the new Command and designated the five commanders who were to serve under him. Three of them were to command the Allied land, air and naval forces; respectively, General Sir Thomas Blamey, Lieut-General Brett and Vice-Admiral Leary. The other two were Lieut-General Wainwright, who had remained on Bataan and was now commander of the forces in the Philippines, and Major-General Barnes who, on Brett's assumption of the Allied air command, was to resume the task of administering the United States Army Forces in Australia.

Allied Air Forces Headquarters, South-West Pacific Area, were established at Victoria Barracks, Melbourne, on 20th April. All United States Army Air Corps tactical units and associated Service elements of the United States Army in Australia, and the operational control of all R.A.A.F. service squadrons (excluding training units), and all service squadrons of the Royal Netherlands East Indies Army Air Force, were assigned to the command. Administrative control of R.A.A.F. units remained with R.A.A.F. Headquarters. On assuming command on that date General Brett announced the appointment to his staff of six Australians: Air Vice-Marshal Bostock as Chief of Staff; Air Commodore Hewitt, Director of Intelligence; Group Captain Scherger, Director of Defence; Group Captain Wiggins, Director of Communications; Wing Commander Hancock, Assistant Director of Plans; and Wing Commander Walters, Assistant Director of Operations. Among the American officers

[8] Craven and Cate, Vol I, p. 420, *note 41*.

appointed were: Colonel E. S. Perrin, Deputy Chief of Staff; Brigadier-General Royce, Senior Air Staff Officer; Colonel Eubank, Director of Plans; and Colonel R. G. Hoyt, Director of Operations.

About a month before Brett's assumption of his own command he had received a letter from Mr Curtin informing him that, in keeping with an undertaking he had given to President Roosevelt, Australia was willing to place its air force under his control. This offer was made in general terms without attempting to define the necessary organisation; in fact the letter expressly stated that the Australian Chief of the Air Staff, Air Chief Marshal Sir Charles Burnett, was authorised to confer with Brett so that he could submit an outline of the organisation needed to provide for the control of the combined air forces and to define the sphere and responsibilities of the Air Board and the relation of both Brett and the Air Board to the Australian Government.

In a memorandum to MacArthur dated 23rd March, Brett had said that the plan which he and Burnett had prepared had been "thoroughly discussed" with the Australian Prime Minister and the Minister for Air. He stated that he had been informed that Burnett had prepared an order which would "place under the control of the Combined Air Forces Commander those combat and training units and establishments of the Royal Australian Air Force which are necessary for the effective accomplishment of the mission of these forces".

Appended to the memorandum was a detailed statement on the whole organisation "as worked out by Air Chief Marshal Burnett . . . and myself, which was approved by the Prime Minister under date 19th March". It contained this important assertion:

> During a war period the efficient employment of forces can be achieved only if there is one responsible commander of all air forces. Consequently the responsibilities of members of the Australian Air Board, with individual board members responsible for different phases of air force activities, will be modified, and this single commander will be solely responsible to the Supreme Command for all phases of air effort.

This joint statement noted that the officers on the staff would be "American and/or Australian", their choice being governed, in principle, by the ability of the individual. The Chief of the Air Staff (Australia) and the Chief of the United States Army Air Corps would be directly responsible, respectively, to the Australian Government (through the Minister for Air) and to the War Department, Washington, for relevant administrative matters.

Sir Charles Burnett's term of service as Chief of the Australian Air Staff would soon expire and a considerable amount of attention had been given to the selection of a successor. Air Marshal Drummond,[9] a distinguished

[9] Air Marshal Sir Peter Drummond, KCB, DSO, OBE, MC. (1914-18: AAMC 1914-15; RFC and RAF, Palestine 1916-18.) SASO HQ RAF ME 1937-41; Deputy AOC-in-C HQ RAF ME 1941-43; Air Member for Training, Air Council 1943-45. Regular air force offr; of Perth, WA; b. Perth, 2 Jun 1894. Killed in aircraft accident 27 Mar 1945.

Australian officer of the Royal Air Force then serving in the Middle East, had been approached tentatively. He had declined the appointment and it was reported that his principal reason for doing so was that the command would be divided between R.A.A.F. Headquarters and Allied Air Forces Headquarters. Burnett then submitted far-reaching proposals affecting the R.A.A.F., the substance of which had been very broadly indicated by Brett in the attachment to his memorandum to MacArthur. But whereas the text Brett had sent to the Supreme Commander stated that "the responsibilities of members of the Australian Air Board . . . will be modified" Burnett's proposals included the abolition of the Board, the appointment of Bostock to succeed him as Chief of the Air Staff, and the union of the R.A.A.F. and the U.S.A.A.F. in the South-West Pacific. Here were issues of great contention. Despite Brett's report to MacArthur that the plan had been "thoroughly discussed" with the Prime Minister and the Minister for Air, Mr Drakeford was by no means prepared to accept Burnett's proposals. However desirable unity of command might be, the transfer of the administration of the R.A.A.F. to an American commander was a step to which he was strongly opposed. His opposition extended with equal force to the abolition of the Air Board and to the appointment of Bostock as Chief of the Air Staff.

It will be recalled that in 1940, on the eve of Burnett's appointment, Fairbairn had anticipated that Williams would succeed the English officer on his retirement. Drakeford was not unmindful of this. At his request, Williams had returned to Australia in February for consultation, after which he had an interview with the Prime Minister. But Mr Curtin was not prepared, at this stage, to accept the return of Australia's highest ranking air officer as the solution to this problem, and took no action towards Williams' reappointment as Chief of the Air Staff. Drakeford did not press the matter further and the choice of Burnett's successor therefore lay between two officers who, in January 1940, had been eleventh and twelfth on the gradation list and who, like eight of the other ten, had had no operational experience in the war against Germany and Italy.[1]

The effect of the Government's failure to insist that senior R.A.A.F. officers should go overseas to gain operational experience in the 1939-41 period of the war against Germany, was now evident. It is necessary to go down the Air Force List for January 1940 to Nos. 27 and 28—Wing Commanders Knox-Knight and Lachal, both of whom served in No. 10 Squadron—to find officers who were to gain extensive operational experience before December 1941, and these officers were then the two most junior wing commanders in the Service.[2]

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[1] The exceptions were Air Marshal Williams with several months' experience with Coastal Command, and Air Commodore Cole who had just been appointed to command No. 235 Wing RAF, in the Middle East.

[2] Of the 15 Australian General Officers Commanding listed in the army reorganisation of April 1942, 9 had been in action in 1940-42 in Africa, Asia or Europe and some of them in all of these theatres. Until the end of the war only two of the General Officers Commanding in the field in the SWPA had not served in action in the Middle East and those two had served in that theatre though not in action.

In the event, briefed by the permanent head of the Department of Air, Mr Langslow, and supported, morally at least, by members of the Air Board, other than Burnett and Bostock, Drakeford made a strong protest to the Prime Minister. He proposed that the Air Board should be retained, that Jones and not Bostock should succeed Burnett as Chief of the Air Staff, that administrative control of the R.A.A.F. should remain with R.A.A.F. Headquarters, and that Bostock's appointment as Chief of Staff to Brett should be confirmed.

Mr Curtin was thus presented with a particularly complex aspect of a problem that posed the fundamental question inevitable in an alliance between the forces of a small but strategically important nation and those of a much more powerful nation. The answer, as doubtless he was aware, had to lie in some kind of compromise that might submerge the identity of the Royal Australian Air Force and might also produce a multitude of administrative problems. The Prime Minister therefore heeded the Minister's contentions and agreed to the retention of the Air Board and to control of administration by R.A.A.F. Headquarters, though there was more than a hint of apprehension in his qualifying warning to Drakeford that, if it was proved that this plan did not work satisfactorily, it might be necessary to revert to the proposal that the operational and administrative control of the R.A.A.F. should be unified.

A condition essential to any satisfactory degree of achievement in such an organisation as that proposed by Drakeford was goodwill among the principals. Already there were two opposing camps, the most senior in each of which—Drakeford and Burnett—had already been in keen disagreement. This disagreement came more sharply into focus after an exchange of minutes at War Cabinet level. On 28th April the War Cabinet recorded this decision:

> On the recommendation of the Advisory War Council (Minute 916) the following interpretation of the decision relating to the assignment of Australian forces to the Supreme Command was approved:
>
> With the service squadrons there is also assigned R.A.A.F. Area Headquarters, Air Combined Headquarters, all Fighter Sector Headquarters, and such Station Headquarters as have been established for the operational control of R.A.A.F. service squadrons.
>
> Operational control of the R.A.A.F. service squadrons and necessary Operational Headquarters as indicated above, is vested in the Commander of the Allied Air Forces.
>
> The Australian Chief of the Air Staff will be responsible for all matters associated with R.A.A.F. personnel, provision and maintenance of aircraft, supply and equipment, works and buildings, and training. These functions are not assigned to the Commander-in-Chief.

Next day Burnett sent a minute to the Minister in which he stated:

> It was agreed at War Cabinet on 28th April 1942 that the interpretation of "the assignment of the Australian Air Forces" means that all operational units of the R.A.A.F., including the headquarters concerned with such units, and the

administration, maintenance and supply organisation to keep the operational units to their maximum efficiency, should come under the direct control of the Commander, Allied Air Forces (General Brett). The training organisation embracing the E.A.T.S. and the administration of all R.A.A.F. personnel and recruiting, will remain the direct responsibility of the Chief of the Australian Air Force.

The minute also requested the Minister to confirm this interpretation with the Prime Minister to enable the new organisation to be established without delay and added that, to save time, a copy of the minute had been sent to the Prime Minister.

Drakeford was annoyed by Burnett's action in sending a copy of his minute direct to the Prime Minister. "The need for saving time," he wrote to Burnett sharply, "does not justify failure to recognise my authority." But this perhaps over-sensitive reaction did not reveal the true point of conflict which lay in the words used by Burnett—"and the administration, maintenance and supply organisation to keep the operational units to their maximum in efficiency, should come under the direct control of the Commander, Allied Air Forces (General Brett)". However wise and necessary their intention, these words were in opposition to the terms of the War Cabinet's minute which, as the final paragraph quoted shows, stated that these functions were not assigned to the Commander-in-Chief.

On 2nd May, Bostock was appointed as Brett's Chief of Staff. Curtin had written to Drakeford stating that "the services of Air Vice-Marshal Bostock are to be made available to Lieut-General Brett as Chief of Staff to the Commander, Allied Air Forces, if the latter is desirous. . . . It is my direction as Minister for Defence that the fullest cooperation is to be afforded the Commander of the Allied Air Forces and this instruction is to be promulgated to all concerned." Drakeford, in a directive to Burnett dated 30th April, in which he stated clearly that "the Chief of the Air Staff would assume responsibility for all matters such as personnel, provision and maintenance of aircraft, supply and equipment, works and buildings, and training of the R.A.A.F." also directed that "the fullest cooperation should be offered Lieut-General Brett".

Appointment of a successor to Burnett could not be delayed longer and on 5th May Jones was appointed Chief of the Air Staff and promoted from the acting rank of air commodore and substantive rank of group captain to the substantive rank of air vice-marshal. This placed him senior in appointment and equal in rank to Bostock, to whom he had been junior in the Service only slightly, but in age by nearly five years. Bostock was regarded as an able officer of driving temperament; Jones as an able and particularly conscientious officer, somewhat shy and reserved. It was characteristic of Jones that he had suggested that Bostock should be appointed Chief of the Air Staff.

Meanwhile the first amalgamation of Australian and American air forces was proving, as those who established it probably expected, that it was at the best an expedient. Despite Brett's assurance to MacArthur that in principle selection of staff officers would be governed by ability, the system

of almost mechanical alternation of American and Australian staff officers right down the line of command, was applied at Allied Air Headquarters and in North-Eastern Area. This was more a diplomatic gesture than a practical method of war organisation. In the first circumstances it was probably the best expedient, however, and it certainly had the merit of throwing officers and men of the two air forces so closely together that they learned more of each other's characteristics and methods in a brief period than otherwise would have been possible. There was, in fact, considerable goodwill between the R.A.A.F. and U.S.A.A.F. staffs, and in North-Eastern Area, as an example, the atmosphere was happy and the staff extremely cooperative.

The operational control of the Allied Air Forces was exercised through the existing R.A.A.F. area organisation with American and Australian coordinated staffs or with American liaison officers attached to Australian staffs in the five areas—North-Eastern, Eastern, Southern, Western and North-Western.[3] Each area headquarters staff was under the sole command of an air officer commanding who was responsible to Headquarters U.S.A.A.F. or R.A.A.F. Headquarters (as appropriate) on all questions of personnel, provisioning, works and buildings, supply and equipment. The Americans, naturally, were conscious of the extent of Australian influence in the new organisation. Each of the five areas was commanded by an Australian; R.A.A.F. officers in fact held a majority of the key command posts. R.A.A.F. administrative forms, strange to the Americans, were used, and this tended to increase American dependence on the R.A.A.F., which itself retained administrative control over its own units. One official American report described Australian control at this time as extending to "every echelon of American Air Forces and every airfield at which they are stationed".[4] Two complete R.A.A.F. directorates—Operations and Plans—and a proportion of the staffs of the directorates of Intelligence and Signals were transferred to the control of Allied Air Headquarters.

Brett sought flexibility of control for offensive operations and on 4th May established two U.S. Air Commands, No. 1, commanded by Colonel (later Brigadier-General) Albert L. Sneed, at Darwin, and No. 2, commanded by Brigadier-General Martin F. Scanlon, at Townsville. The object was to place with the combat units in each area a mobile command which could move forward with them on the "leap frog" principle, to assume command at the next forward base acquired in an offensive campaign. But these were early days for such organisation, which quickly proved impracticable, and within the month the commands had been dissolved.

Meanwhile G.H.Q. had directed that, if invasion became imminent, all Australian and United States forces (army, navy and air) serving in the

[3] The area command organisation was adopted by the Allied Air Forces on 11th May 1942. Eastern Area was not formed until four days later. It covered New South Wales and southern Queensland while Southern Area covered Victoria, South Australia and Tasmania.

[4] Quoted in Craven and Cate, Vol I, p. 420.

Darwin and Port Moresby areas should be placed under the operational control of the general officer commanding the respective forces. These general officers commanding would continue to operate under the direct command of the Commander, Allied Land Forces and would not, except when attack was imminent, "disturb the execution of the general plans" of local commanders of the Allied air and naval forces or of the Commanding General, U.S. Army Forces in Australia. Brett lost a highly competent officer in May when Brigadier-General George was killed on the ground at Darwin by an aircraft that swerved off the runway.

Once Allied Air Force Headquarters had been established and the operational functions of the Australian Chief of the Air Staff had been taken away from him, the composition of the Air Board, which had been preserved at the Minister's insistence, necessarily underwent a change. Four appointments remained unaltered—Chief of the Air Staff (Air Vice-Marshal Jones), Air Member for Personnel (Air Commodore Wrigley[5]), Finance Member (Mr Elvins[6]) and Business Member (Mr W. Sydney Jones[7]). The office of Air Member for Organisation and Equipment, held until 14th May by Air Vice-Marshal Anderson and from that date until 3rd June by the Chief of the Air Staff himself, was abolished. In its place the office of Air Member for Supply and Equipment was created and Air Commodore Mackinolty was appointed to it. Similarly, that of Director-General of Supply and Production, which had been held by Mr R. Lawson, was deleted, and that of Air Member for Engineering and Maintenance substituted with Air Commodore E. C. Wackett as the appointee. Since Air Vice-Marshal Bostock's appointment to General Brett's staff, there had been no Deputy Chief of the Air Staff; Air Commodore McCauley, who had held office briefly as Assistant Chief of the Air Staff, was now given this appointment.

Another change was a proposal to form five maintenance groups to improve the administration of all maintenance units. The first group (No. 5) was formed at Sydney in June to control all maintenance units in New South Wales, Queensland and in Noumea.[8]

With the development of the Allied Air Forces in progress, the problems of achieving an efficient supply service put a heavy tax on both American and Australian resources. The haste inevitable in the dispatch of equipment and units from the United States still resulted in the arrival of one without the other, the equipment more often than not requiring servicing and repair—notably that shipped as deck cargo. Brett therefore created a new

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[5] AVM H. N. Wrigley, CBE, DFC, AFC. (1914-18: Capt Aust Flying Corps; 2 and 3 Sqns.) Comd 1 Gp 1939-40; AOC Southern Area 1940; Air Member for Personnel 1940-42; AOC Overseas HQ 1942-46. Regular air force offr; of East Malvern, Vic; b. Melbourne, 21 Apr 1892.

[6] H. C. Elvins. Finance Member Military Board 1940-41, Air Board 1941-46. Comptroller United Nations Secretariat 1946-49. Public servant; b. Yarrawonga, Vic, 13 Aug 1887.

[7] W. Sydney Jones. (1914-18: 7 Fd Arty Bde 1914-17; Lt 3 Div Arty 1918.) Business Member, Air Board 1940-44. Company manager; b. Blayney, NSW, 25 Nov 1890.

[8] No. 4 Maintenance Group was formed at Melbourne on 14th September 1942 to serve Victoria, Tasmania and South Australia. No other groups were formed. At this time the RAAF still manned advanced operational bases at Noumea and Vila but only American naval aircraft were operating from them.

command—the United States Army Air Services—with Major-General Rush B. Lincoln as commander. Formed on 27th April as an "administrative, supply, maintenance and engineering command", it accepted a vast and crucial task. Air service elements normally were attached to the tactical units, but under the new command air base groups were given area responsibility with the result that one such group in the Townsville area was called on to service and maintain seven different types of combat aircraft plus various kinds of transport aircraft. The responsibility of the air depot group, charged with assembly and maintenance of aircraft, was equally pressing. In April there was only one such group in Australia, so that its units had to be divided between three centres—one at Footscray, Victoria, where a central supply depot was established, one at Brisbane which was a branch supply depot, and one at Wagga Wagga (New South Wales) which was a major repair depot. In May another group was formed at Brisbane for aircraft assembly and maintenance. To ease the strain the Australian Department of Aircraft Production, together with private industrial organisations and airline companies, assisted by providing facilities and experienced staff. Perhaps the most ambitious project in this vital phase of the air war effort was that begun in May at Tocumwal, New South Wales, for the construction of a "permanent" supply and maintenance depot requiring four all-weather runways on the aerodrome, satellite airfields, a depot staff of 2,000, and accommodation for 4,600 "military personnel".

The provision and distribution of aviation fuel was alone a huge undertaking beset by many difficulties, not the least of which was that imposed by the diversity of Australia's railway gauges. Supplies of 100 octane fuel were comparatively small and most of the storage capacity was in New South Wales and Victoria. Rail transport to the north where most combat units were stationed was out of the question, for every time a break in gauge occurred the fuel would have to be pumped from one rail tanker to another. Sea transport was the alternative and this meant handling the fuel in an enormous number of drums, which had to be brought from the United States.

As yet, the air transport services were unequal to the task of providing any substantial relief to the services of supply. Within the R.A.A.F., air transport was still in the "luxury" class: the planes were not available. Transport aircraft were included in the pressing requests being made for the allocation of aircraft—requests addressed particularly to the United States. But, no less than combat aircraft, these were in such demand that the waiting list was huge and the deliveries few. Some planes had been acquired from the civil airlines and others requisitioned for service under contract, and the civil airlines, notably Qantas Empire Airways, Australian National Airways, Guinea Airways and Airlines of Australia, gave splendid service. With its Sydney-Singapore mail service suspended since February because of enemy action on the route, Qantas were operat-

ing their flying-boats between Sydney and Darwin as required. Their crews were also undertaking reconnaissance flights, as were the crews on the trans-Tasman service. To the end of April the Commonwealth had impressed 36 aircraft from the regular airline companies and 94 other privately owned aircraft. Most of the impressed aircraft were light types suitable for use in flying training.

A notable though very limited contribution by the U.S.A.A.F. had already been made when Captain Paul I. ("Pappy") Gunn, formerly manager of Philippine Airlines, whose wartime exploits in the Philippines had made him a legendary figure in the Service, was placed in command of an American air force transport unit. In January 1942 a group of officers and enlisted men, who "happened" to be available, were allotted to Captain Gunn to fly and service a strange assortment of old and new aircraft—two aging B-18's and one C-39 that had come from the Philippines, and five new C-53's and three Liberators which had just arrived from the United States. The unit was based on Archerfield, near Brisbane, then the focal point for the delivery and distribution of American supplies. It worked under pressure and performed prodigious "lifts" until the Directorate of Air Transport, Allied Air Force, S.W.P.A., was formed under the command of Group Captain Harold Gatty,[9] an Australian pioneer airman who, professionally, had adopted, or been adopted by, the United States.

By this time the R.A.A.F., having received a number of Dakota (C-47) transport aircraft, had set about establishing units of its own. Between 6th February and 12th March four transport squadrons—Nos. 33 (Empire flying-boats and Catalinas), 34 (DH-84's), 35 (Fox Moths and DH-84's) and 36 (DC-2's)—were formed in North-Eastern, North-Western, Western and Southern Areas respectively. No. 33 acquired the two Empire flying-boats which had been serving with Nos. 11 and 20 Squadrons. About two weeks later one of these crashed on take-off. Of eleven on board six (including a member of the W.A.A.A.F., Corporal Diggles[1]) were killed, two died later from injuries and three, though injured, survived.

Lack of suitable air bases was not only a hindrance to the progress of the air war effort, it could become the very limiting factor in air defence. To supplement the already immense task being undertaken by the American engineering units in conjunction with the Allied Works Council, the Air Board made a realistic assessment of what was most urgently needed. It was "an organisation capable of producing landing fields in forward areas at short notice while under threat of air attack". This was not a task for a civil construction organisation. The Board therefore planned

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[9] Gp Capt H. Gatty. (RAN College 1917-20.) Director of Air Transport, AAF SWPA, 1942-43. Regional Director Pan American Airways and research engineer for USAAC; b. Campbell Town, Tas, 5 Jan 1903. Died 30 Aug 1957. (Author of *The Raft Book* and other works.)

[1] Cpl R. A. Diggles, 93900, WAAAF. Northern Area. Clerk and typist; of Brisbane; b. Brisbane, 30 Oct 1913. Killed in aircraft accident 27 Feb 1942.

the formation of what was designated No. 1 Mobile Works Squadron,[2] which would have a survey, planning and camouflage section, and engineering construction, camp construction and repair and maintenance sections (even including a small sawmill). The squadron would be organised for 24-hours-a-day operation and would be staffed by 27 officers and 1,010 airmen. It had been estimated that if such a unit was to undertake all the work projected for the R.A.A.F. and U.S.A.A.F. in the Northern Territory alone, it would be fully occupied for more than five years.[3] On 19th March the War Cabinet gave its approval, and the new unit was formed in April and began field operations in North-Western Area in July. It was the forerunner of an organisation that was to grow until two wings were in operation.

The bombing of Darwin had intensified the demand for the development of an inland ferry route and "all engineering activities suddenly assumed an aspect of urgency".[4] The engineering section of the U.S.A.F.I.A. was, as already noted, heavily engaged in developing its own organisation and in coping with its share in the big task.[5] Added to these demands for aerodrome facilities were those of the Royal Navy and the United States Navy. The U.S.N. wanted a parent aerodrome and six dispersal fields in the Sydney area. The Royal Navy asked for one parent and two dispersal fields in the Schofield area, near Sydney, and jointly the two navies required one parent and four dispersal fields in the Fremantle area. Approval for the construction of these fifteen fields was given on 29th July. In North-Eastern Area there were four operational aerodromes in the Townsville region, Garbutt (near Townsville itself), Antil Plains, Reid River and Charters Towers. Plans had been made for the construction of an aerodrome at Iron Range on the east coast of Cape York Peninsula. In the Port Moresby region there were three—Seven Mile, Ten Mile and Three Mile, the last two being little more than emergency fields at this stage. In wet weather the fighters had to move from the Three Mile to the Ten Mile. Four more fields had been planned and were expected to be operational by October.

The Department of Civil Aviation also had considerable related responsibilities for aerodromes. At the end of April there were in Australia 188 aerodromes and emergency landing grounds provided and maintained by the Commonwealth, and 206 licensed public aerodromes controlled by local authorities. The R.A.A.F. had taken over 39 civil aerodromes for training in addition to using space at five capital city airports for the same purpose. The U.S.A.A.F. had also established units at certain civil

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[2] Later to be known as an airfield construction squadron.

[3] In the aerodrome section of the directorate alone the program in March 1942 provided for the selection and construction of 100 new airfields for use by the USAAF and RAAF.

[4] *Engineers of the Southwest Pacific 1941-1945*, Vol VI, p. 6 *et seq.*

[5] Nevertheless, when in June 1942 a plan for an inland ferry route was approved, comprising a project to construct 5 main and 3 emergency airfields from Melbourne to Cloncurry, the task was commenced immediately under top priority. The airfields were Roto, Cobar and Bourke in New South Wales, and Cunnamulla, Quilpie, Blackall, Longreach, Winton and Cloncurry in Queensland.



North-Western Area.

airports, and other civil aerodromes had been enlarged for use by American aircraft. The Civil Aviation Department's aeronautical engineering branch was now undertaking important design and modification work to meet the demand by the R.A.A.F. for the conversion of both civil and service aircraft. This work included designing the modification of four DC-3 aircraft which, early in the war, had been commissioned on charter from Australian National Airways, and four Empire flying-boats taken over by the R.A.A.F. Design work was also needed for the adaptation of DH-84, DH-86 and DH-89 aircraft for use in the air observer schools. Twenty-two of these aircraft were converted in civil airline workshops under the supervision of the department's engineers. The re-design of three DH-86's for use as air ambulances had been accomplished in this way. Designs had also been prepared for the modification of DH-84, Douglas DC-2, Junkers G-31 and Ford aircraft as ambulances.

In April the War Cabinet asked the United Kingdom Government to allow Australia to retain the first 90 Australian-made Beaufort bombers that had been bespoken for Britain. The request was granted though the United Kingdom Government did not "officially endorse any change that would amount to withdrawing Australian Beauforts from the aircraft pool". At the same time it was thought unlikely that Britain would bid for a share in the Australian Beaufort production. The Beaufort production program was a responsibility of the Department of Aircraft Production, which had been created in June 1941, with Senator Leckie[6] as its first Minister; and, from January 1942, with Mr Essington Lewis as Director-General, it replaced the Aircraft Production Commission. On 18th February 1942 the War Cabinet had reviewed the practicability of building in Australia a well-armed interceptor fighter.[7] There were three main reasons for supporting this proposal, which had been submitted by the Commonwealth Aircraft Corporation. The first was a recognition of the need for some insurance against the possibility that deliveries of American fighter aircraft might be seriously interrupted or prevented. The second was that, with the Wirraway program now regarded as complete, C.A.C. needed a project to occupy their 2,000 skilled workers until tooling up had been completed for the production of what was known as the CA-11 bomber; the prototype of this aircraft had been completed for flight testing in September 1941 and 105 had been ordered. The third reason submitted in support of the new fighter proposal was the ready availability of Wirraway parts and basic materials. Production of this aircraft could begin almost immediately. The War Cabinet accepted this planning and authorised an order for 100 of the new type, to be known initially as CA-12.[8] The Australian aircraft supply position, as it

[6] Hon J. W. Leckie, MLA Vic 1913-17. Senator 1934-47; Asst Minister for Labour and National Service 1940-41; Minister for Aircraft Production 1941. Manufacturer; of Kew, Vic; b. Alexandra, Vic, 14 Oct 1872. Died 25 Sep 1947.

[7] War Cabinet Agendum No. 46, 1942.

[8] This aircraft was later to be named the Boomerang. It became CAC's second operational aircraft to be used in combat. For a more detailed account of Australian aircraft production see D. P. Mellor, *The Role of Science and Industry*, in the civil series of this history.

related to the principal operational types at 8th May 1942, is shown in the accompanying table.

Type	*No. on Order*	*Source*	*Delivery details*
Beaufort	180	Dept of Aircraft Production	80 by end July, 20 a month, then 40 a month
Catalina	119	USA	27 received, 6 allocated
Hudson	246	„	All received or en route
Kittyhawk	771	„	50 received, 69 en route, 6 allocated
Beaufighter	362	UK	54 received or shipped
Vultee Vengeance	367	USA	Possibly 12 en route
Boston	—	„	27 received from NEI
CA-11 (bomber)	105	Dept of Aircraft Production	To begin Jan 1943; planned production rate 20 a month
CA-12 (intereeptor-fighter)	100	„	To begin June 1942 at 10 a month
Transports (type not specified)	90	USA	Indefinite
Flying Fortress	143	„	Indefinite
Mitchell	—	„	19 received or shipped
Vought Sikorsky	—	—	34 received from NEI
Dornier	—	—	6 received from NEI

Inability to determine with any real degree of accuracy the numbers and types of aircraft that would be allotted to the Allied Air Forces made it very difficult to assess the aviation fuel needs. An Aviation Fuel Co-ordinating Committee was formed, the membership comprising one representative each from U.S.A.F.I.A., the R.A.A.F., and the U.S.A.A.F. The combined stock of aviation fuel on hand on 8th May was approximately 30,000,000 imperial gallons and the reserve in fuel and oil needed for six months of war operations, so far as it could be estimated, was set at 53,000,000 gallons of aviation spirit and 2,120,000 gallons of aircraft engine lubricating oils. The War Cabinet approved of the installation of additional tanks for inland bulk storage in Australia with a capacity of 20,760,000 gallons which would bring this "safe area" storage capacity to about 25,000,000 gallons of aviation spirit.

A special obligation had been placed on local manufacturers for the supply of highly specialised equipment such as radio units and electrical bomb-control mechanism, delivery of which could not be obtained from overseas. The bomb-control mechanism was needed to replace unprocurable pneumatic mechanism previously obtained from Great Britain. The Standards Association of Australia was providing valuable aid by creating standards for metallic materials that met the specifications for both British and American aircraft.

These problems of service and supply, though they were many and

great, were not insuperable. The American concept of the supply situation at this stage has been expressed thus:

> Considering the brief interval that had elapsed since the debacle in the Netherlands East Indies, however, the emphasis must be placed on the progress made. During April and May, significant steps were taken by the Australian Government to adjust the economic capacities of the country to the needs of Allied military forces. In close coordination with General MacArthur's staff, the administrative machinery was provided to relieve congestion in the harbors, for a more efficient direction of the production and distribution of food, and for the supply of labor and equipment required in the construction of military installations. Through these and other actions, Australia's productive capacity would substantially reduce the burden imposed on Allied shipping.[1]

If the dominant Australian note in the initial structure of the Allied Air Forces had soon to become subdued, the R.A.A.F. itself was now, in May, a force twenty-two times greater than its immediate pre-war numerical strength of 3,489 (310 officers and 3,179 other ranks). In little more than two years and a half its numbers had reached 79,074 (5,714 officers and 73,360 other ranks). The total was divided as shown in the accompanying table.

	Officers	*Airmen*	*Total*
Home Defence Units:			
Serving in Australia	1,714	40,200	41,914[2]
Serving overseas	295	1,050	1,345
Prisoners of war	150	198	348
Total Home Defence	2,159	41,448	43,607
Empire Air Scheme:			
Staffs of units	2,247	16,094	18,341
Aircrew under instruction in Australia	44	8,285	8,329
Aircrew under instruction overseas	—	1,213	1,213
Aircrew serving overseas	1,230	3,794	5,024
	34	375	409[3]
Total E.A.T.S.	3,555	29,761	33,316
E.A.T.S. Squadrons		2,151	2,151
Grand total	5,714	73,360	79,074[4]

To meet the demands of the war in the East the Air Staff prepared a plan for the expansion of the R.A.A.F. to a force of 73 squadrons. This was sent to the Minister on 6th February in the form of a draft War Cabinet Agendum, but 17 days later no action had been taken. Thereupon Burnett by-passed the Secretariat, took a copy of the draft Agendum to a War Cabinet meeting and it was approved in principle.[5] On 2nd March the War Cabinet approved a re-drafted Agendum, with an important though obvious qualification being expressed in the words "having regard to the availability of aircraft". With 73 squadrons established, the first-

[1] Craven and Cate, Vol I, p. 424.

[2] Including 413 officers and 11,380 airmen under instruction.

[3] Awaiting embarkation as at 1st May 1942.

[4] Including 5,780 members of the W.A.A.A.F.

[5] Minute by DCAS, 27th February 1942.

line strength was to be 1,314 aircraft. Mobility was to be the key to the use of this force, and so provision was made in the plan for 9 transport squadrons so that combat squadrons in any one area could be reinforced speedily from other areas if necessary. Apart from these units, the composition of the force could be: 11 general reconnaissance (medium and torpedo bomber), 12 dive bomber, 7 flying-boat, 24 fighter, 4 heavy bomber, 1 fleet cooperation, and 5 army cooperation squadrons.

On 20th May the Air Board decided to make 45 squadrons the objective to be achieved by the end of the year, but it was soon seen that not enough aircraft would be available, and the revised objective, set in October, was to have 35 squadrons by April 1943.

These, then, were the terms on which the R.A.A.F. was planning. The answer to the problem lay not only in the provision of sufficient aircraft of the right type but in training the crews to man them, a need that was being heavily emphasised by the extreme strain under which the existing combat units were operating. One of the keenest questions of the time, therefore, was the extent of the Australian overseas contribution to the Empire Training Scheme. The last draft for Rhodesia had been dispatched on 7th January, and when the 300 still in training there had passed out that phase of the program would end. At that time the drafts to Canada had been suspended but, on 24th February, the War Cabinet had decided that "for the present" Australia would continue to provide her agreed quota. There were six qualifying factors attached to this decision: (*i*) the reduction in the number of partially-trained men sent abroad caused by the increase in the percentage of men given advanced training in Australia, (*ii*) development to the highest stage possible of facilities for operational training in Australia, (*iii*) the acquisition of the aircraft needed for the proposed developments, (*iv*) a regulated inward flow of Australian aircrew with combat experience to provide a nucleus in each R.A.A.F. unit in Australia, (*v*) retention of sufficient fully-trained aircrew to fill the establishments of Australian squadrons at home and abroad, and (*vi*) the allotment of as many Australian aircrew as possible to fill the establishments of the "infiltrated" R.A.A.F. squadrons in the Pacific theatre. So far as ground staff were concerned, the planned growth of the R.A.A.F. was such that obviously airmen in the essential musterings, whose numbers had been banking up in anticipation of the formation of further *Article XV* squadrons for overseas service, would be absorbed by units forming in Australia.

"Post-graduate" training was now an essential need, and the capacity of the operational training units to meet it was being developed. Gunnery and reconnaissance schools, torpedo training units and seaplane training squadrons were being formed, their establishments being keyed to the "undergraduate" training plan. In these days when actual combat units were so few and so hard pressed, the front-line value of these operational training units and even of service flying training schools, could not be overlooked and provision was made for their use in an emergency. The

R.A.A.F. in this way provided itself with 17 reserve squadrons (4 Wirraway dive bomber, 2 Battle general purpose and 11 Anson general reconnaissance units) giving a second-line strength of 414 aircraft available for service at short notice.

One of the most serious handicaps to the development of the increasingly vital training program was the aircraft unserviceability rate. This was so high that it was causing anxiety. A conference of all R.A.A.F. directors concerned, held late in April, recommended urgent action to hasten and improve the supply of spares. It was emphasised that provision of spares was the first responsibility of the Department of Aircraft Production. On reviewing the directors' report, the Air Board decided that the British Air Ministry should be informed urgently that the slow delivery of spares was causing a breakdown in the E.A.T.S. commitments. It noted a recommendation of the conference that until the serviceability rate was improved the intake of pilots for training should be halved. The chief cause of engine unserviceability was dust on the aerodromes, which had been greatly increased by unusually dry weather. Provision of air cleaners on the engines was an urgent need and the sealing or at least gravelling of runways was a task which in the board's opinion should not be deferred by consideration of expense or manpower. The conference had reported as a further important factor the delay in the delivery of Vultee Vengeance dive bombers, an order for which had been placed in the United States. Instead of arriving at a rate of 20 a month, none had yet been delivered. This had meant that Wirraways intended for training had been diverted to operational squadrons and preference in the provision of spares had therefore been given to those squadrons. Of the Wirraways in service for training 56 per cent were unserviceable, as were 48 per cent of the Fairey Battles.

Another and related problem arose from the need for the R.A.A.F. to provide facilities for American air units. This affected the whole training pattern, for already six E.A.T.S. schools, including the site of the Central Flying School at Camden, had been vacated to make room for U.S.A.A.F. formations. This meant that the capacity of the remaining schools had to be increased by 75 per cent to absorb the staff and trainees so displaced. On 12th March Brett had written to Burnett proposing that all Australian "flight and operational training" and the technical training of ground staff should be undertaken in the United States. This he contended would relieve congestion on Australian aerodromes and offer better aircraft production, maintenance and repair facilities. The trainees could be carried to America in ships that were returning empty. Burnett regarded this proposal as impracticable because the establishment of an organisation of adequate size for such a project could not be achieved within a year, efficiency would be lost in the time spent in transit to and from the United States, and the aircraft then in use would be wasted. Added to this, Australian policy had now been directed towards retaining as much manpower as was practicable in the Commonwealth at this critical time.

In Washington the War Department ended the discussion by formally stating that such training could not be undertaken by the U.S.A.A.F.

A phase of specialised training at this time was provided by the School of Army Cooperation that had been established on 29th December 1941 at Canberra. Now commanded by Wing Commander Stephenson,[6] R.A.F., who had had considerable experience in this type of training in the Middle East, the school was attended by members of both the air force and the army.

Meanwhile the Empire training plan, which had now been in operation for almost exactly two years, was being reviewed in the light of experience and changing circumstances. At a conference held in Ottawa in May the extension of training in Canada for a further period of two years—to 31st March 1945—was planned.[7] On 3rd June a new agreement, to become known as the British Commonwealth Air Training Plan, was signed. This superseded the four-Power agreement of 1939. To come into operation on 1st July 1942, it related specifically to training in Canada. Australia undertook to endeavour to send each year 1,300 pilots trained to elementary flying school standard and 676 observers and 936 wireless air gunners trained to initial school standard.

Australia's four-weekly commitment for aircrew trainees drafted to Canada remained as amended in January 1941: pilots from elementary schools, 100; observers and wireless air gunners from initial schools, 52 and 72 respectively. The deficiency in the numbers of pilot trainees caused by the four-months suspension of drafts after Japan's entry into the war had been largely made up by the increase in subsequent drafts but the lapsed quotas for observers and wireless air gunners in this period had not been filled. To provide for its own home defence needs without drawing on the aircrew trained under the Ottawa agreement the R.A.A.F. planned an increase of 25 per cent in pilots and 10 per cent in aircrew generally. The rate of intake every four weeks, including this increase, now became 480 pilots, 203 observers and 320 wireless air gunners and air gunners. These intakes were expected to give an output of 336 pilots, 172 observers and 272 wireless air gunners and air gunners. From these outputs the R.A.A.F. was entitled to retain its requirements for its own squadrons to the extent required to man the aircraft allocated to it.

For the two-year period of the new agreement it was planned that Australia should take in for training 26,286 aircrew to be fully trained in Australia and 6,838 to complete their training in Canada—a total of 33,124. Thus the planned total *intake* for the two years was far more than the total planned *intake* set by the original agreement (26,420). From this original intake total to March 1943, an output of 15,956 had been expected. But by sending 675 trainees to Rhodesia and increasing

[6] AVM J. N. T. Stephenson, CB, CBE, RAF. Comd 613 Sqn RAF 1940-41, School of Army Cooperation Canberra 1942-43; Deputy Director of Tactical Opns Air Ministry 1943-45; comd 345 Wing SEAC 1945-46. Regular air force offr; of London; b. Camberwell, London, 16 Nov 1907.

[7] The details and effects of this conference are reviewed by J. Herington in *Air War Against Germany and Italy 1939-43*, in this series.

the quotas to Canada and the intake for aircrew for complete training in Australia the total output of Australian aircrew for the period was, in fact, raised to 19,197. Experience showed the percentage of wastage to be 31.33 in pilot training and 11 and 11.33 respectively in the training of air observers and wireless air gunners.[8]

An issue that had been causing concern for some time was the practice of granting a substantial percentage of commissions on graduation. Though this was in keeping with the terms of the agreement circumstances were proving that it was impracticable to maintain the percentages. The large increase in the number of trainees and the consequential drain on the sources from which they were being drawn, was accompanied by a decline in the average quality of the recruits. To maintain the same basis of commissioning in these changed circumstances meant that very competent members of aircrew, who had graduated from earlier courses without commissions, now had less opportunity of gaining them than aircrew from current and future courses whose standard might well be inferior to theirs, and who lacked their operational experience. Apart from limiting the actual standard of competence in operations in a direct sense, this could cause discontent to aircrew in all theatres. The matter was reviewed both at the Ottawa conference and in subsequent discussions in London, at which the R.A.A.F. representatives advocated that any member recommended and found suitable should receive a commission. The percentage system should be used simply as a general guide so that approximately the same over-all proportions would be commissioned. The proposal was accepted and adopted for pilots and navigators (as air observers had been redesignated about this time). The percentage basis was retained for wireless air gunners and air gunners.

The lower qualifications of a proportion of later batches of aircrew applicants was a problem that remained to be overcome. The army gave some aid by agreeing to release men anxious to join the air force as aircrew, but resisted all attempts on the part of the R.A.A.F. to recruit ground staff from its ranks; the men the air force most desired were the very men the army was least willing to part with.

Transfer of the operational control of the Commonwealth's meteorological services to the Air Board had been one of the early and logical decisions of the War Cabinet. That was in 1939. The decision had left administrative control of these services with the Department of the Interior. This had proved cumbersome and so, in July 1940, that function had been transferred to the Department of Air. In April 1941 all members of the meteorological services, except a number engaged in exclusively civil duties, were either enlisted in or appointed to the R.A.A.F's newly formed Directorate of Meteorology with Group Captain Warren[1] as the

[8] Most trainees who failed to qualify as WAG's graduated as air gunners.

[1] Gp Capt H. N. Warren, 252489. Director of Meteorological Services RAAF 1941-46, Allied Meteorological Services SWPA 1942. Public servant; of Melbourne; b. Melbourne, 6 Apr 1888. Died 5 Aug 1950.

first director. At the Central Bureau in Melbourne a central headquarters had been provided for the administrative control and direction of all meteorological activities throughout the Australian region, the coordination of services with those of adjoining countries, special investigations for the high commands, training of staff for war stations, development and research activities, and instrument maintenance and repair. A divisional bureau in each capital city controlled observer stations and other meteorological units in its area and provided the State's forecasting requirements both military and civil. A meteorological officer serving on the staff of each air force area coordinated the meteorological services of all air force stations in the area, one forecasting station meeting the operational needs of a group of air force stations. There were permanently staffed stations at intervals of from 300 to 500 miles along the principal air routes. Army formations in the field—corps and divisional headquarters—had specially trained and equipped flights or sections from a mobile meteorological squadron. The navy's meteorological needs were provided mainly by synoptic radio messages transmitted from a master station at Laverton. Daily information on coastal and seaward conditions was sent to navy headquarters and naval and merchant shipping were specially served, the facilities including a storm warning system. A "fleet message" providing a descriptive weather chart of the relevant areas was transmitted in code for the use of meteorologists at sea with major naval units.

In the research and development field much was being achieved through the local production of mobile equipment and radio-sonde ground and airborne equipment. This gave information about upper air conditions at considerable altitudes, work that had immediate operational value and promised considerable improvement in the accuracy of forecasting. Climatological data compiled by the civilian staff before the war proved to have great wartime value. Studies in this field, compiled for the use of forces operating in enemy-occupied areas, were supplied to General Headquarters, and the headquarters of the Allied Naval Forces and Allied Air Forces. Long-range forecasts were also made to cover the movement of combined operational forces.

In June 1942 No. 15 Weather Squadron of the U.S.A.A.F. reached Australia. To achieve coordination between this unit and the R.A.A.F. Meteorological Service in administration and equipment, General Brett appointed Group Captain Warren to be Director of Allied Meteorological Services in the South-West Pacific Area. The commanding officer of the American unit was appointed deputy director.[2]

Daily forecasts were prepared with the aid of reports from several hundred observer stations, most of which were manned by honorary staff located chiefly at post offices and lighthouses. Most of this informa-

[2] Late in 1942 the American squadron was detached and posted to serve exclusively as a mobile weather unit with Fifth Air Force. The Allied meteorological organisation was therefore dissolved and the RAAF organisation resumed independent operations. About this time a GHQ Meteorological Committee was formed from representatives of the various Services, with the RAAF director as chairman.

tion was transmitted by telegraph land-line but, for inland areas, the R.A.A.F. Meteorological and Signals services developed between them a system of radio communication through special meteorological broadcasting stations at Laverton (Victoria), Richmond (New South Wales), Amberley and Townsville (Queensland), Birdum (Northern Territory) and Pearce (Western Australia).

These highly-organised and widely-distributed services raised an unusual aspect of censorship. An endeavour was made to deny, in every way possible, the passage of weather information to the enemy and yet meet the urgent economic needs of the community. Locally produced codes were distributed to all essential points in the South-West Pacific Area, the South Pacific and Indian Ocean regions and to the British Air Ministry and Admiralty for use by ships and ferried aircraft moving into the South-West Pacific Area.[3]

An important decision affecting the progress of the Women's Auxiliary Australian Air Force was that by which the War Cabinet on 14th July made it a part of the Citizen Force branch of the Commonwealth Defence Forces. This meant that, instead of being enrolled, airwomen were formally enlisted, and officers were granted commissions by the Governor-General as were members of the R.A.A.F. Whereas, previously, on enrolment members undertook to submit to certain minor punishments, under the new regulations there was a distinct disciplinary code. Members of the W.A.A.A.F. were not given the right to elect to be tried by court martial and there were certain sections of the *Air Force Act* under which they could not be found guilty. Normally they could be punished for breaches of the regulations only by their commanding officer. Penalties were lighter than those prescribed for members of the R.A.A.F. To deal with a serious offence the commanding officer was given power to adjourn the proceedings and, with the consent of the Attorney-General, to take action for prosecution in a civil court. If an offence warranted it a member could be discharged from the Service. But provision for such extremes was more a formality than a need. The women's auxiliary, from having gained acceptance in the face of masculine prejudice, had come to be accepted as an indispensable part of the air force.

While endowing a W.A.A.A.F. officer with much the same legal powers as a R.A.A.F. officer, the regulations provided that a W.A.A.A.F. officer could not be a member of a court martial, could not exercise command over male members of the air force unless such members had been detailed for duty under her command and were in fact engaged in such duty, and could not order into arrest or exercise any disciplinary power or powers

[3] The introduction of new procedures and new codes by the US Forces in the SWPA led to a Pacific Region conference at Auckland in 1942. Recommendations from this conference were passed to the Combined Chiefs of Staff, Washington, under whom the Combined Meteorological Committee dealt with all weather problems in all theatres of war. In March 1943 a representative of the RAAF Meteorological Services was sent to Washington to assist the committee in coordinating systems for use in the Pacific areas. Meanwhile the RAAF services had expanded to a staff strength (as at 1st May 1943) of 199 officers, 321 assistants and 301 charters, of whom the WAAAF provided 9, 64, and 120 in the respective categories. This staff served on 48 forecasting and 27 observing stations.

of punishment over any male members of the air force. The W.A.A.A.F. now numbered more than 12,500 airwomen and almost 350 officers.[4] The musterings in which its members were authorised to serve totalled 42. Fresh service trades in which members of the W.A.A.A.F. might serve had been proposed early in 1942. Some of these were new for women in Australian civil life; examples were meteorological assistant, instrument repairer and radar operator, the last also having no civilian counterpart among civilian men.[5]

On assuming office in October 1941 the Curtin Government had stopped all recruiting for the W.A.A.A.F. but a month later it had been resumed on an even greater scale. Throughout the war the areas in which members of the W.A.A.A.F. might serve were frequently discussed and the arguments for and against sending them to such operational areas as Darwin, Port Moresby and Milne Bay were weighed, but ministerial direction blocked all such plans; none served farther north than Cairns and Charters Towers. In North-Eastern Area, soon after the Allied Air Forces began operating from there, a considerable number of W.A.A.A.F. members were posted to Townsville. Some time later rumours of misbehaviour directed against them gained currency but with little justification. An investigation by responsible officers showed that the average standard of W.A.A.A.F. behaviour was higher than that of women in the normal civilian population. There was some concern that these rumours would have an adverse effect on W.A.A.A.F. recruiting and a move to withdraw members from the area was made in July but before long their number was being increased instead of decreased.[6] While the conditions of service broadly were comparable with those in the R.A.A.F., rates of pay for airwomen were generally two-thirds of those for airmen in the same musterings, with lower rates for minors and, in certain circumstances, with allowances lower than those granted to R.A.A.F. members. For officers the rates of pay were comparable with those of the R.A.A.F. Nursing Service.

Another ancillary service of considerable value to the air war effort, and notably to the home defence system, was that provided by the Voluntary Air Observers' Corps. Inaugurated in 1941, it had developed rapidly. The original memorandum that gave form to the corps had set out a general plan for the establishment of a network of observation posts arranged in a uniform pattern to cover the coastal belt and the industrial areas of the Commonwealth. Towards the end of 1941 the Air Board had accepted the plan and on the last day of the year the

[4] The WAAAF's strength as at 31st December in each year of the war period was: 1941, 1,583; 1942, 14,195; 1943, 16,892; 1944, 17,999; 1945, 7,180; 1946, 500. For comparison, the approximate strengths of the four women's services at September 1944 were: WRANS, 2,000; AWAS, 18,000; WAAAF, 18,000; Nursing Services, 900.

[5] On 30th October 1942 the Air Board issued an order describing the reorganisation of the WAAAF to permit the entry of women into 26 additional musterings and by December eight more were added to the list (including that of shoemaker though only one was ever on strength). In all, WAAAF members served in more than 70 musterings.

[6] The increase was due mainly to the formation of a radio station at Townsville. By December 1942 there were more than 400 airwomen serving in the units based there.

War Cabinet had given approval for the formation of the corps. Navy coastwatchers and military reporters also used the network. The telephone system, with direct lines when necessary, was used where possible to link observation and control posts, and teleradio sets were installed at control posts to provide continuous communication between these points and the main control posts. A high degree of priority was given by the Postmaster-General's Department to all aircraft sighting reports, which were known as "airflash" messages and which could be transmitted to the appropriate centre within minutes. The naval and military authorities and the local defence coordinating committees all collaborated in the inauguration of the system. By 31st March 1942 six main control posts, 13 subsidiary posts and 483 observer posts were in operation on a 24-hour basis. The V.A.O.C. was also established in the Darwin and Port Moresby areas where radio was the main means of communication. In north-western Australia, between Darwin, Wyndham and Port Hedland, use was made of the pedal "transceiver" sets that had been installed by station owners and others as part of the Flying Doctor Service network; about 150 of these sets were brought within the V.A.O.C. system.

With the expansion of air operations after the formation of Allied Air Headquarters, the observer system was expanded, hundreds of new posts being established. In critical areas the system extended as much as 150 miles inland and it ranged from Cairns in north Queensland, down the entire eastern seaboard and thence westward to Ceduna in South Australia. In Western Australia it extended from Albany northward to Geraldton. At the request of the United States forces an air-raid warning system was installed by the corps at Charleville. To reduce delay in the transmission of reports from control posts to fighter sectors, the zoning systems adjacent to the sectors were intensified so that each would have between 60 and 70 observation posts. Although primarily a "landward" pre-warning system for plotting and tracking the movements of enemy aircraft, the corps gave valuable aid to Allied aircraft that were in difficulty and was responsible on a number of occasions for saving the lives of aircrew and their aircraft.[7]

A significant administrative step taken in 1942 was the formation in January of the Rehabilitation Section within the Directorate of Personal Services. The significance lay in its timing; the task of fitting members of the Service for their return to civil life had begun while enemy victories dominated the news and recruiting and training for a war which threatened to become increasingly grim were at high pitch. It was good psychology. It demonstrated complete confidence in the outcome of the war and it gave the best possible assurance to those in or about to enter the air force that the Service was accepting a responsibility for their welfare that was beyond the limits of their efficiency in war.

[7] By May 1943 the corps had a membership of 38.000, manning 7 capital city and 36 other control posts and 2,639 observation posts.

But the chief rehabilitation officer, Squadron Leader Gordon,[8] in private life a schoolmaster of more than ordinary academic and athletic distinction, had been given a task of singular difficulty. To make any progress he must first convince Service officers whose cooperation was essential, and these included members of the general duties branch who were concerned exclusively with combat, that a rehabilitation program at this early date was not only wise but urgent. To attempt this was to invite the challenge, "What about letting us *win* the war first?" That challenge was frequently expressed. To answer it effectively called for patience, tact and intelligence. Fortunately Gordon had strong and wise backing, particularly from his director, Wing Commander Winneke,[9] who, like himself, possessed a specialised knowledge of human reactions; Gordon's having been gained in the field of progressive education while Winneke's came from distinguished practice at the Bar. But apart from its ultimate purpose the rehabilitation program had an immediate value which Gordon used as a wedge. Inevitably a large part of a fighting Service is not engaged in combat. Many R.A.A.F. units, including quite a number that were operational, were forced to spend long periods at isolated posts where, with only routine duties to perform, they had to counter extreme monotony. The Rehabilitation Section was charged with providing facilities for non-service education—the real foundation for rehabilitation. The purpose of these facilities was to promote and encourage individual study and group discussion and the subjects might range anywhere within the field of intelligent thought and action. Here was Gordon's opportunity to prove the immediate value of rehabilitation. The stimulation of constructive thinking itself offered the best antidote for boredom, a complaint to which moral fibre is so very susceptible. Rehabilitation officers were selected and sent into the field. Initially it was a research task but to those who saw the war in some perspective it was a most encouraging development. It was also a development that entitled the R.A.A.F. to claim credit for vision and for constructive thinking on its own part—its Rehabilitation Section had been formed six months earlier than that of any other fighting Service for which records are available.

[8] W Cdr C. E. S. Gordon, 253863. AMF 1941; Directorate of Personal Services RAAF 1942-45. Headmaster of St Peter's College Adelaide 1946-60. B. Bernice, British Guiana, 24 Dec 1907. Died 22 Aug 1960.

[9] Gp Capt Sir Henry Winneke, OBE. Inspectorate of Aircraft Accidents 1940-41; Dep Director of Personal Services 1942, Director 1943-46. Solicitor-General, Victoria, since 1951. Of Kew, Vic; b. Melbourne, 29 Oct 1908.

CHAPTER 25

THE CHINA-BURMA-INDIA THEATRE

BEHIND India's eastern bulwark, where the Allied forces would have a chance to regain their fighting strength, security was no foregone conclusion. The sea approaches to both Calcutta and Ceylon were practically unbarred and this, as Wavell wrote later in his despatch on the campaign, was "India's most dangerous hour".[1] The British Eastern Fleet had insufficient air defence to venture into the north-eastern waters of the Bay of Bengal where, late in March, reconnaissance crews found that a strong Japanese naval force was operating. This force, which was in fact covering the approach of a large convoy to Rangoon, was a cause of heightened anxiety at Calcutta where a large number of Allied ships were lying.[2] Lacking naval defence, Wavell's headquarters ordered all vessels to clear the port and disperse through the Bay of Bengal. One key to their safety lay in avoiding detection by Japanese reconnaissance aircraft, a probability greatly increased when, on 23rd March, the enemy had captured Port Blair in the south of the Andaman Islands and established there a squadron of long-range flying-boats.

The former No. 139 Squadron, recently re-formed as No. 62, had only three serviceable Hudsons, but these were the only aircraft with the range needed for an attack on this base and they could gain that range only by refuelling at Akyab. If the "eyes" of the enemy were to be blinded, only the Hudsons could do it and so to their crews fell the hazardous task of making two mast-height sweeps over Port Blair. Two attacks were made, each by two aircraft, the first on 14th April and the second four days later. In both these raids they found the enemy's flying-boats conveniently moored in line. They destroyed two twin-engined and three four-engined flying-boats and severely damaged most if not all the others. The Hudson crews were attacked by Zero fighters during their second sweep. One aircraft got back to base though severely damaged by gunfire, but the other failed to return. This was the price paid for a most valiant and valuable operation in which the enemy had, in fact, been blinded to the movement of 70 ships, totalling about 250,000 tons, all of which made safe passage through the Bay of Bengal.[3]

On the eve of the fall of Rangoon Wavell had cabled to the Chiefs of Staff an appreciation in the course of which he expressed the opinion that "an undue proportion of our very inadequate land and air resources . . . was being allocated to the defence of Ceylon".[4] But the War Cabinet

[1] A. P. Wavell, *Operations in Eastern Theatre, based on India, from March 1942 to December 31, 1942,* para 5.

[2] This convoy reached Rangoon on 6th April with large Japanese reinforcements in troops and equipment.

[3] No Japanese flying-boat reconnaissance flights were made over the Bay of Bengal for the next four months.

[4] Wavell, *Operations in Eastern Theatre, based on India, from March 1942 to December 31, 1942,* para 3.

ruled that the defence of the naval bases in Ceylon must have priority. At the end of March the air strength in the island was three Hurricane, one Blenheim and two Catalina squadrons, plus some Fairey Fulmars and Albacores of the Fleet Air Arm. Australians in substantial numbers were serving with No. 11 (Blenheim) Squadron and with the three fighter units, one of which—No. 258 (Hurricane) Squadron—was based on the Colombo racecourse with No. 11, while No. 30 (Hurricane) Squadron was at Ratmalana, the city's civil airport, and No. 261 (Hurricane) Squadron at China Bay air base close to Trincomalee on the opposite side of the island. The two Catalina units were at Koggala in the south.

The Eastern Fleet had been built into a considerable force by the end of March, when it comprised 5 battleships, 3 aircraft carriers, 7 cruisers, 15 destroyers and 5 submarines, under the command of Admiral Sir James Somerville.[5]

On 31st March elements of the Eastern Fleet were at sea searching for an enemy fleet said to include a strong aircraft carrier force and to be moving to attack Ceylon. The British ships made no contact with the enemy and so the main force withdrew to the Maldives for refuelling, leaving the cruisers *Dorsetshire* and *Cornwall* to return to Colombo and the carrier *Hermes* to move to Trincomalee.

At 4 p.m. on 4th April a Catalina crew on reconnaissance reported a large enemy surface force steering on a north-westerly course in a position about 360 miles south-east from Colombo. No more signals were received from this Catalina, the crew of which failed to return. A second Catalina then took up the search. Shortly before midnight its crew reported sighting a naval force of what appeared to be 3 battleships, 2 cruisers and 7 destroyers in position about 250 miles south from Colombo. The identity of these ships was quickly revealed when a salvo of shells burst, harmlessly but close enough to rock the Catalina.

As the Eastern Fleet, 600 miles away, was refuelling in the Maldives, well out of combat range, shipping that could move immediately was ordered to clear Colombo Harbour. About 48 vessels put to sea, including the *Dorsetshire* and *Cornwall* which had orders to rejoin their fleet.

Radar units in Colombo were not yet ready to operate, but, after the warning received from the Catalina crews, 36 Hurricanes from Nos. 30 and 258 Squadrons and 6 Fulmars were on stand-by ready to "scramble" when, at 7.40 a.m. on Easter Sunday, 5th April, more than 50 Japanese Navy bombers, escorted by about 35 Zeros, were sighted approaching Colombo from the south. As some of the enemy formations descended from 12,000 feet to bomb shipping and dock installations from between 1,000 and 2,000 feet, others made a high-level attack on the harbour and Ratmalana aerodrome. The Hurricanes and the Fulmars gained altitude in time to engage the enemy, 19 of whose aircraft were believed to have been shot down, 7 probably destroyed and 9 claimed as damaged, for a

[5] Admiral of the Fleet Sir James Somerville, GCB, GBE, DSO, RN. (Served Dardanelles 1915-16.) C-in-C East Indies 1938-39; comd Force "H" 1940-42; C-in-C Eastern Fleet 1942-44; Head of Admiralty Delegation to USA 1944-45. Of Somerset, Eng; b. 1882. Died 19 Mar 1949.

loss of 15 Hurricanes and 4 Fulmars. The anti-aircraft batteries claimed 5 more enemy planes. It was a spectacular battle lasting an hour and 20 minutes, in which there were many "dog-fights" over the city, one Canadian pilot making a forced landing on the lawn in front of the Galle Face Hotel. Flying Officer Caswell,[6] an Australian pilot with No. 30 Squadron, RAF, shot down two enemy aircraft by making dives straight through their formation before he was killed in combat with a third.

Considering the strength of the attack the enemy aircraft accomplished little; two naval vessels were sunk, a merchant ship was set on fire and the base workshops were seriously damaged. Damage to Ratmalana airfield was slight.

At 8.30 a.m. 10 Blenheims, from No. 11 Squadron, the crews of which had been briefed before the raid began, took off from Ratmalana in search of the enemy naval force. They flew south for 150 miles and searched in vain, returning with their bombs still in the racks. Apart from heavy cloud in the probable target area the crews had failed because they had been incorrectly briefed on information from a Catalina which relayed an S.O.S. from another aircraft in such a way that it was mistaken for its own.

But much of what the raid on Colombo lacked in achievement was made up for the Japanese by a formation of navy bombers which intercepted the British cruisers *Dorsetshire* and *Cornwall* on their way to rejoin the Eastern Fleet. The cruisers far beyond aid from shore-based aircraft were dive-bombed with deadly accuracy and both were sunk. After 30 hours spent in the water 1,122 of the 1,550 men on board were rescued by H.M.S. *Enterprise* and two destroyers which responded to an S.O.S. from a Fleet Air Arm reconnaissance aircraft.

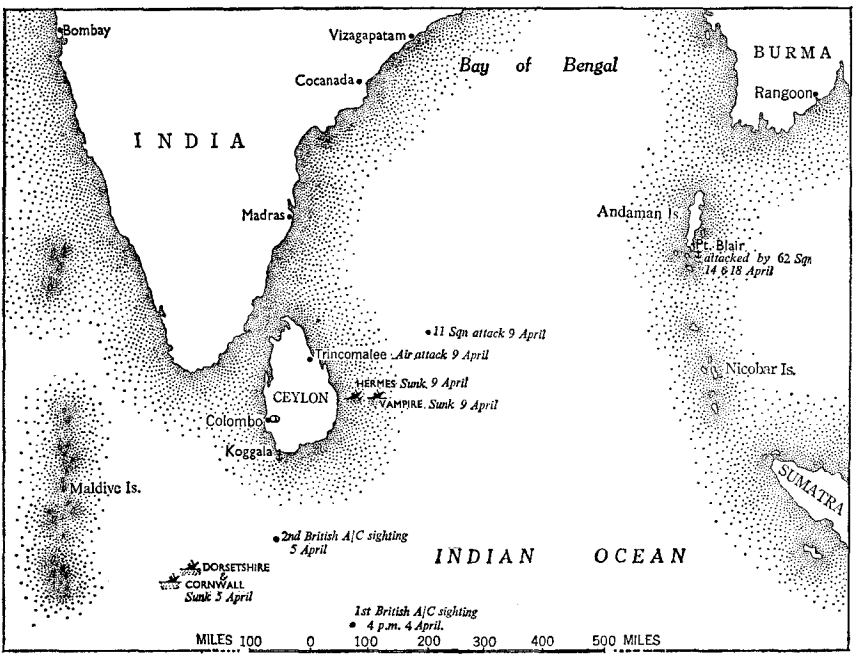
For the next three or four days the enemy warships busied themselves with considerable success in hunting Allied merchant ships in the southern waters of the Bay of Bengal. Fifteen vessels were sunk by aircraft and eight by warships. Enemy aircraft also raided Cocanada and Vizagapatam about midway up the east coast of India on the 6th, but they achieved little.

The British naval base at Trincomalee was the next major Japanese target. The first warning of the attack was received about 3 p.m. on the 8th when a Catalina reported three battleships and a carrier south-east of Trincomalee steering north-west. Shortly after daylight on the 9th, again a Catalina sighted the Japanese force, but before this aircraft could signal details of composition and position it had been shot down. Radar equipment was operating at the naval base and about 7 a.m. this too gave warning of the enemy's approach—about 50 bombers with about 60 Zeros as top cover. Coming in at from 12,000 to 15,000 feet they were met by 17 Hurricanes from No. 261 Squadron and six Fulmars, which had been sent ashore from the carrier *Hermes*. The attack was concentrated on the dockyards and the China Bay air base. A munitions

[6] F-O G. E. Caswell, 404709. 123, 124 and 30 Sqns RAF. Overseer; of Toowoomba, Qld; b. Rockhampton, Qld, 6 Feb 1918. Killed in action 5 Apr 1942.

ship was sunk in the harbour and the cargo which had just been unloaded from her was destroyed when a bomb hit a munitions store on shore.

Among the Hurricane pilots, one Australian—Pilot Officer Rawnsley[7] —had claimed one enemy aircraft probably destroyed and had definitely shot another down into the sea in flames before a burst of enemy fire



wounded him in the left ankle. He made a forced landing but his wound prevented him from leaving the cockpit. Japanese fighters, which had followed him down, were attacking when a R.A.F. pilot, Flying Officer Edsall,[8] ignoring their gunfire raced to Rawnsley and dragged him to safety. Edsall then made a dash to save the aerodrome's only petrol tanker and in doing so was mortally wounded. Another Australian pilot —Flight Sergeant Mann[9]—had also claimed one enemy aircraft as probably destroyed when his Hurricane was damaged by enemy fire. He baled out into the sea and since two enemy fighters were circling him he discarded his conspicuous Mae West life-jacket along with his parachute and swam away from them, under water for part of the distance. The

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[7] F-Lt L. T. Rawnsley, 402753, 122, 261 and 17 Sqns RAF. Bank officer; of Binnaway, NSW; b. Auckland, NZ, 3 Jul 1918.

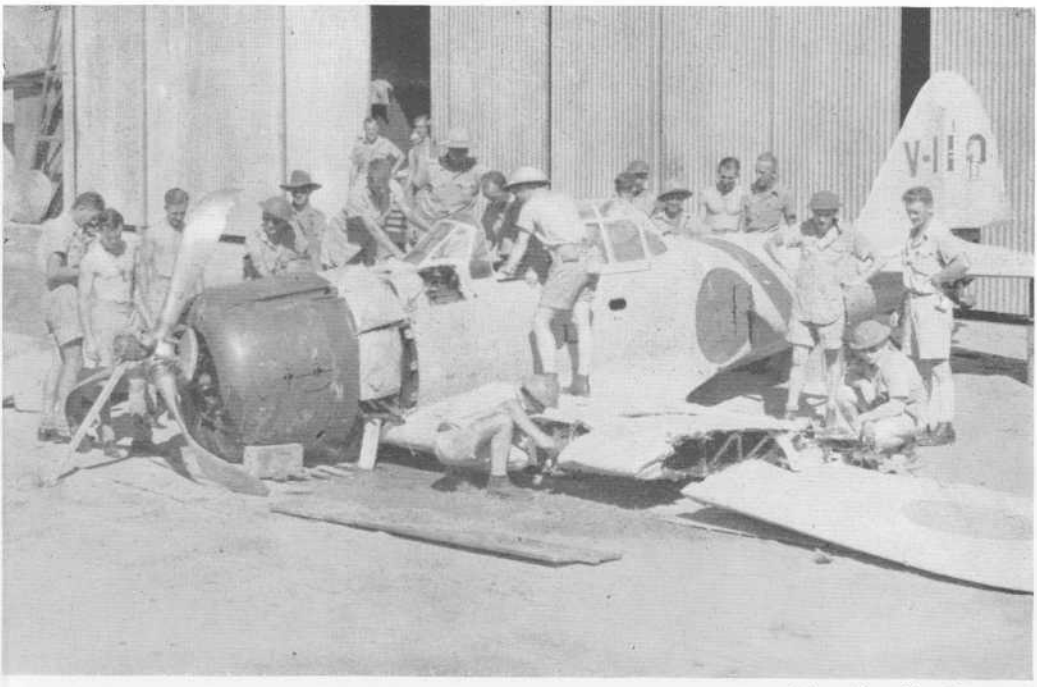
[8] F-O E. F. Edsall, DFC, 81368, RAF. 54, 222, 602 and 261 Sqns RAF. Caterer; of London; b. Wimbledon, London, 16 Jun 1918. Died of wounds 12 Apr 1942.

[9] F-Lt K. A. S. Mann, 402377; 261 Sqn RAF. Shipping clerk; of Rose Bay, NSW; b. Sydney, 10 May 1918.



(*Australian War Memorial*)

General Douglas MacArthur, Commander-in-Chief Allied Forces, South-West Pacific Area; General Sir Thomas Blamey, Commander, Allied Land Forces; and Major-General George C. Kenney, Commander, Allied Air Forces, at Port Moresby, 2nd October 1942.



(*Australian War Memorial*)

A Zero fighter, forced down near Port Moresby in April 1942, was salvaged and brought in comparatively intact for Intelligence investigation.



(R.A.A.F.)

The United States Liberty ship *Starr King* sinking off Port Macquarie after being torpedoed by a Japanese submarine on 10th February 1943. During six months from 18th January 1943 Japanese submarines attacked 21 Allied ships totalling 109,651 tons off the east Australian coast and ships totalling 50,022 tons were sunk.



(R.A.A.F.)

Catalinas from No. 3 Operational Training Unit at Rathmines, New South Wales, on a formation flying exercise. Previously known as the Seaplane Training Flight, this unit provided the final training for the crews of Nos. 11, 20, 42 and 43 Squadrons in the multiple tasks of long-range reconnaissance, supply-dropping, bombing, and minelaying.

enemy did not attack and Mann swam the considerable distance to the shore. As he swam he saw a Hurricane crash after combat with about six Zeros. The pilot, who was killed, proved later to be a fellow Australian, Sergeant Pearce.[1] Of only three Australians serving as pilots in No. 261 Squadron at this time, one had been killed, one wounded and the third forced to bale out.

Before the enemy raid began the 14 crews of No. 11 Squadron were being briefed for an attack on the Japanese naval force, now known to include several aircraft carriers and battleships. Engine and armament faults prevented four aircraft from leaving the ground but at 9.20 a.m. 10 Blenheims left Colombo to attack. En route to the target engine failure reduced the force by another aircraft. Of the nine Blenheims which finally attacked two of the crews were all-Australian, and there were Australians in all other crews but one.

The Blenheims, carrying a varied bomb-load of 500-lb and 250-lb general-purpose and 250-lb anti-submarine bombs, found their target "dead ahead": 5 aircraft carriers, 3 battleships, 4 heavy cruisers and a variety of other craft—a total of more than 40 warships. The Blenheims came down to 11,000 feet and began their bombing runs against a large carrier. The enemy ships held their fire until the Blenheims were practically overhead, perhaps mistaking them for their own aircraft; then practically every ship in the fleet opened fire. Several near misses were the best the Blenheims could record with their bombing but all came safely through the barrage of gunfire. Enemy fighters—between 45 and 50 of them—then attacked. One bomber piloted by a Rhodesian, Flying Officer C. H. Adcock, with two Australians as crew—Flying Officer Burgan[2] (navigator) and Sergeant Gray[3] (wireless air gunner)—was immediately shot down. Other Blenheim crew members saw the tracer coming from the Blenheim's gun as Gray continued firing until the last.

Another Blenheim piloted by a South African, Lieutenant D. Knight, with two Australians as crew members—Flying Officer Evans[4] and Sergeant McAuley[5]—was shot down when flying low over the sea, and a third which had an all-Australian crew—Sergeants Maclennan[6] and Travers[7] and Flight Sergeant Nell[8]—also went into the sea after a fierce running fight just above the water. Other crews thought that Maclennan's crew had

[1] Sgt W. E. Pearce, 402825. 64 and 261 Sqns RAF. Clerk; of Sydney; b. Sydney, 31 Mar 1919. Killed in action 9 Apr 1942.

[2] F-O G. S. Burgan, DFC, 407284. 37 and 11 Sqns RAF. Transport driver; of Woodville, SA; b. McLaren Flat, SA, 7 Jul 1916. Killed in action 9 Apr 1942.

[3] Sgt M. C. Gray, 407152; 11 Sqn RAF. Chaff merchant; of North Walkerville, SA; b. Prospect, SA, 21 Jan 1918. Killed in action 9 Apr 1942.

[4] F-O D. H. Evans, 406203; 11 Sqn RAF. Farmer; of Cottesloe, WA; b. Cottesloe, 30 Jun 1911. Killed in action 9 Apr 1942.

[5] Sgt L. E. McAuley, 402093; 11 Sqn RAF. Grazier; of Yelarbon, Qld; b. Brisbane, 22 May 1915. Killed in action 9 Apr 1942.

[6] Sgt H. A. Maclennan, 404107; 11 Sqn RAF. Bank officer; of Brisbane; b. Toowoomba, Qld, 5 Sep 1914. Killed in action 9 Apr 1942.

[7] Sgt A. R. Travers, 408017. 211 and 11 Sqns RAF. Farmer; of Sulphur Creek, Tas; b. Hobart, 10 Jul 1910. Killed in action 9 Apr 1942.

[8] F-Sgt F. J. G. Nell, 400120; 11 Sqn RAF. Bank officer; of East St Kilda, Vic; b. Casterton, Vic, 7 Nov 1918. Killed in action 9 Apr 1942.

accounted for two Zeros just before the bomber hit the sea. The Zeros claimed their fourth victim when they shot down a bomber piloted by another Australian (Warrant Officer Stevenson[9]).

Meanwhile the leader of the Blenheim formation, Squadron Leader Ault,[1] whose wireless operator-air gunner was an Australian (Sergeant Eckersley[2]), now free from enemy fighters, headed back to base. When approaching the Ceylon coast, this crew met a formation of 50 enemy bombers and fighters which appeared directly ahead. The fighters broke off and attacked Ault's aircraft which was shot down only 15 miles from the coast. Against tremendous odds No. 11 Squadron had suffered severely. Without achieving any success it had lost five crews and aircraft, and the four crews that escaped were fortunate to reach their base. They estimated that four enemy fighters were shot down.

The enemy formation, from which fighters had broken off to attack Ault's Blenheim, was in fact returning from another phase of the Japanese assault. While Trincomalee was being raided two enemy reconnaissance aircraft found *Hermes* about 60 miles out to sea. All available British fighter aircraft were deeply engaged over China Bay, and so the British carrier and her escort, the Australian destroyer *Vampire,* were bereft of air cover. It was not long before the two ships were being fiercely attacked by a force of 85 enemy dive bombers and nine fighters. The onslaught, as described later by Captain A. J. S. Crockett, a marine gunnery officer in *Hermes,* was "carried out perfectly, relentlessly and quite fearlessly". "The aircraft," he added, "peeled off in threes, coming straight down on the ship out of the sun on the starboard side."[3] Both ships were hit repeatedly and 20 minutes after the attack began *Hermes* and *Vampire* had both been sunk. *Hermes* and *Vampire* accounted for four enemy aircraft between them; 20 officers and 296 ratings, mostly in *Hermes,* lost their lives.

This series of attacks—as it happened, their last over these waters—had profited the Japanese to the extent of two British cruisers, an aircraft carrier and a destroyer, all sunk, and some damage to British installations ashore and vessels in the harbour. Thanks to the Catalina crews' warnings the damage in the port was but a fraction of what it might have been had the harbour not been cleared. The Japanese had also accounted for a number of the defenders' aircraft. Though all the Japanese ships were virtually undamaged, at the time it was thought that Admiral Nagumo had paid a dear price for his successes, having suffered severe losses in carrier aircraft. Post-war calculations, however, indicate that even in this respect the cost was comparatively small. A British naval historian has commented, "At the time we believed that the defending fighters had

[9] W-O N. L. Stevenson, 407083. 223 and 11 Sqns RAF. Assistant accountant; of Adelaide; b. Adelaide, 23 Apr 1918. Killed in action 9 Apr 1942.

[1] Sqn Ldr K. Ault, 33214, RAF. 139, 218 and 11 Sqns RAF. Regular air force offr; of Usk, Monmouthshire, Eng; b. Usk, 1 Jan 1916. Killed in action 9 Apr 1942.

[2] Sgt G. K. Eckersley, 404290; 11 Sqn RAF. Accountant; of Tarragindi, Brisbane; b. Tarragindi, 19 Jun 1918. Killed in action 9 Apr 1942.

[3] D. Richards and H. St G. Saunders, *Royal Air Force 1939-1945,* Vol II, p. 75.

inflicted heavy losses on the Japanese carrier planes, especially over Colombo; but it is now plain that the claims were greatly exaggerated. According to Japanese records the whole operation only cost them seventeen aircraft."[4]

Remote as they were from all these naval aviation engagements in the waters off Ceylon, the American Volunteer Group in north-east Burma were still fighting in their own spectacular way in the same theatre of war. The Allies had further reason for gratitude to the pilots of the group when, on 24th April, they took revenge for the enemy's assault on Magwe. In a stealthily executed raid by Kittyhawks on Chiengmai, a strong Japanese base in the teak forest just across the Thai border, the American pilots believed that they destroyed at least 30 aircraft just as they were preparing to take off, besides wrecking barracks and hangars and leaving fuel stores blazing. Though it cost the A.V.G. two of its best flight leaders, this raid checked the enemy's air operations long enough to allow the R.A.F. to complete the evacuation of refugees from the battered Magwe base, which prompted Stevenson to signal to Chennault, "Many thanks for the breathing spell furnished by your magnificent attack on Chiengmai."

Depletion in men, aircraft and supplies had meanwhile caused Chennault to send (perhaps understandably) a bitter message to China's Foreign Minister, Dr Soong, then in Washington as head of the Chinese war supply mission. Chennault's message reported that the group had only one effective squadron left and that the usefulness of the A.V.G. and of himself would "finish by 15th April" unless immediate action was taken.[5] About this time Chiang Kai-shek wanted the A.V.G. to provide air support for his own armies in Burma, but Chennault held that without adequate air-to-ground communications, trained liaison officers and a reliable Intelligence service, such support was impracticable. He compromised by flying "morale" missions to let the Chinese troops see the now legendary spiked sun and shark-tooth insignia of the Chinese-owned fighters.

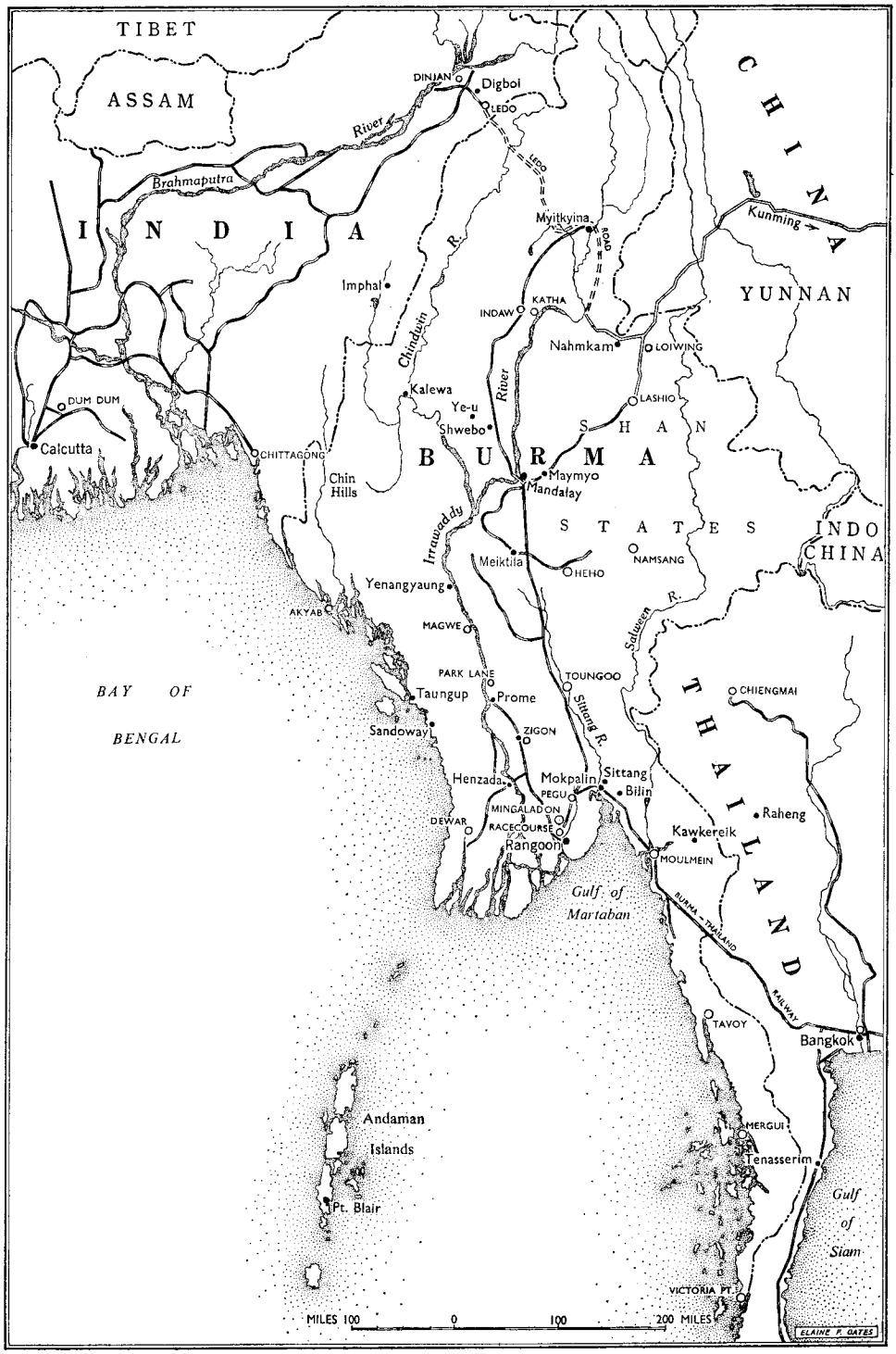
With these troubles mounting within the A.V.G., the enemy had raided their base at Loiwing on 8th April. The Japanese loss was 10 Zeros to the defenders' 2 Hurricanes in combat and 2 Kittyhawks on the ground. When the Japanese returned two days later 9 Kittyhawks were damaged on the ground in a dawn raid during an atmospheric radio blackout but the enemy lost 8 fighters.

Much of Chennault's success lay in his knowledge of Japanese tradition and psychology. It was this which enabled him to anticipate, for example, a Japanese air assault timed, as he predicted it would be, a day in advance

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[4] S. W. Roskill, *The War at Sea 1939-45,* Vol II (1956), p. 28.

[5] In April the United States Army Air Force formally recalled Chennault to active duty and promoted him to the rank of brigadier-general, but meanwhile he was being intensely critical of the War Department for, as he phrased it, their "indecision, obstruction, non-support and passive inactivity [in the] Far East".—Chennault, *Way of a Fighter,* p. 154.


TIBET
ASSAM
INDIA
CHINA
YUNNAN
SHAN STATES
INDO CHINA
THAILAND
BURMA
BAY OF BENGAL
Gulf of Martaban
Gulf of Siam
Brahmaputra River
Chindwin R.
Irrawaddy River
Sittang R.
Salween R.
Kunming
Myitkyina
Imphal
Digboi
DINJAN
LEDO
LEDO ROAD
BURMA-THAILAND RAILWAY
INDAW
KATHA
Nahmkam
LOIWING
LASHIO
Kalewa
Ye-u
Shwebo
Maymyo
Mandalay
Meiktila
HEHO
NAMSANG
Yenangyaung
AKYAB
MAGWE
PARK LANE
Taungup
Prome
TOUNGOO
CHIENGMAI
Sandoway
ZIGON
Henzada
Mokpalin
Sittang
Bilin
PEGU
MINGALADON
RACECOURSE
DEWAR
Rangoon
Kawkereik
Raheng
MOULMEIN
TAVOY
Bangkok
MERGUI
Tenasserim
Andaman Islands
Pt. Blair
VICTORIA PT.
Calcutta
DUM DUM
CHITTAGONG
Chin Hills
MILES 100 0 100 200 MILES
ELAINE P. OATES

of Emperor Hirohito's birthday (29th April) to gratify him with "good news" on that occasion. On the 28th the raiders duly appeared—27 bombers with fighter cover. The battle, fierce but brief, ended with the score believed to be 22 to nil in favour of the A.V.G.

In the adjacent jungle the Japanese did achieve good birthday news for the Emperor on the 29th when they overwhelmed the Chinese forces and captured Lashio. The Chinese troops then withdrew from Loiwing, Chennault's most useful base with its valuable aircraft overhaul depot. The A.V.G. had no choice but to follow after abandoning valuable facilities and destroying by fire 22 Kittyhawks which were under repair and could not be flown out. The A.V.G. force retired to Kunming, while the pilots of No. 17 Squadron, who had been operating with them from Loiwing, returned to India by way of Myitkyina, to be re-equipped with Hurricane IIs and so take their part in the defence of Calcutta.

There was a dramatic interlude in the C.B.I. Theatre about this time—one born in the mind of strategists in the United States, and of deep interest to President Roosevelt. It was planned deliberately as a psychological shock to the Japanese and a stimulant to Allied morale. An American naval task force including two aircraft carriers, destroyers and oilers, under the command of Vice-Admiral Halsey, was heading through the north Pacific Ocean to a point about 800 miles east of Japan. From this point the carriers were to proceed alone. On the flight deck of one of the carriers, U.S.S. *Hornet,* were 16 Mitchell medium bombers lined up for take-off. Their leader was Lieut-Colonel James H. Doolittle and the crews now manning the bombers were all volunteers for a low-level air attack on Tokyo. Halsey's squadron, having traversed more than 4,000 miles of the north Pacific, had now, at 6.45 a.m. on 18th April, sighted an enemy patrol vessel. The outward sea voyage ended soon afterwards. An enemy air strike on Halsey's task force could now be expected, and, while Doolittle had hoped that the carrier would take him within about 500 miles of Japan, it had been planned that the safety of Halsey's force should not be jeopardised and that, in these circumstances, the bombers would take off even though they might not reach their bases in eastern China.

So it was that at 7.25 a.m. the first of the Mitchells, piloted by Doolittle, roared down *Hornet*'s flight deck and took off into a 40-knot gale that was sending seas over the carrier's bows. The other 15 bombers followed, each pilot accomplishing safely a take-off never before undertaken. Halsey turned his force about and set course back across the Pacific, a voyage accomplished without enemy interference.

Doolittle's formation had 668 miles to fly before reaching Tokyo. This gave the crews one advantage: though doubtless Tokyo had been warned by the patrol vessel of the presence of Halsey's force the Japanese would not expect any attack until at least the following day. Thus the raiding Mitchells were unopposed when they crossed the Japanese coast and roared in over the capital at a height of about 1,000 feet. By chance the Tokyo

defences (it was learned later) were then engaged in air raid practice and Doolittle had loosed his load of incendiaries on the target before the real raid alarm was sounded. In succession other Mitchells released the three 500-lb bombs and a single incendiary cluster that made up their bomb-loads. Some attacked Tokyo's oil stores, factories and defence installations and (by overshooting the target in error) some bombed thickly populated centres. Other aircraft bombed targets at Kobe, Yokohama and Nagoya. At Yokosuka naval base a carrier in dry dock was hit by at least one bomb. Only one of the Mitchells was hit by anti-aircraft fire and the damage was slight. All sixteen aircraft cleared the Japanese coast and, with an unexpectedly strong tail wind, headed for selected airfields in eastern China where they were to refuel and then fly to Chungking to remain in China under General Stilwell's command. But, since they had been forced to take off ten hours ahead of the planned time, the bombers were now flying in darkness and, it happened, through rain and dense overcast. Some crews baled out and others crash-landed. All the bombers were lost but 14 of the crews survived. Of the 50 men who parachuted all landed safely but one, who was killed. All the crew of one bomber that crash-landed were injured, some critically. One crew flew too far north and landed beyond Vladivostok; the Russians interned them. Two crews landed in Japanese-held territory and became prisoners of war; two of their number were later executed after a military trial.

As for its value, the assessment, of course, varied with the point of view. It made the Chinese unhappy because 16 of their precious medium bombers had been lost on a mission that so emphasised to the Japanese the strategic value to the Allies of the airfields in Chikiang province that they made haste to capture them before they could be adequately defended. The Japanese, though they must have known that such raids could not be sustained, were persuaded by this one to keep four army fighter groups in Japan even when, later, they were urgently needed on one or other of the battle fronts.

China, too, was to be the unexpected destination of a substantial group of members of the R.A.F. When all the airworthy aircraft had been withdrawn from Magwe after the enemy's attack on 21st-22nd March, there had been no air transport to take out the R.A.F. ground staff. Therefore Burwing Headquarters and the ground elements of Nos. 45 and 17 Squadrons and those of No. 113 Squadron who had remained behind when their unit had moved earlier to India, had gathered what transport was available and made their way by road to Lashio. With them was a group of aircrew, including several Australians, who had been left without aircraft. From Lashio they set out on 27th April in two motor convoys for Myitkyina. The journey was through mountainous country, periodically drenched by the pre-monsoon rains, and across streams spanned only by native-built makeshift bridges. The way was crowded by refugees making for the same destination, and the R.A.F. convoys crawled along the difficult road, held up at frequent intervals by traffic

blocks. Passing through Namhkam, close to the China frontier, they reached Myitkyina on 2nd May. Here they divided. As air transport offered, the aircrew members were flown to Dinjan, whence they made the final stage of the journey to Calcutta by rail. The ground staff—20 officers and 324 airmen—could not be so evacuated. They therefore set out in motor transport on a long and hazardous journey into China, to Chengtu, where they were to await the arrival of Hudson aircraft that, in fact, could never be sent, and where, known as "Rafchin", they were to spend the next year assisting the Chinese in the development of air bases and in training ground staff. They were also able to give their allies some elementary instruction in the use of radio direction finding, for they took with them the original unit they had used in the defence of Rangoon.

While General Alexander's columns were still in occupation of Mandalay on 3rd April the Japanese Air Force struck. A direct bomb hit wrecked the fire station and unchecked fires and bomb explosions destroyed all but about one-fifth of the ancient town. Hundreds of the inhabitants and of the many refugees who had gathered there perished.

Aircrews flying on operations over Burma in this period were acutely conscious that two evacuations were in progress from Lower Burma. One was the organised civil and military evacuation, planned and executed with all the care and efficiency possible in so grim a situation. It was attended by many hardships but it saved many lives. The other was the unorganised evacuation of civilians. This was an aspect of the loss of Rangoon—the key to the loss of Burma—which had its origin in the initial Japanese bombings of the city. It is not appropriate here to describe in detail the mass evacuation of half a million people—chiefly Burmese, Chinese and Indian—but no account of the air warfare in Burma should ignore its significance or its consequence. Valiant work was done by the civil and military administrators in an endeavour to lessen the plight of these people, but terror stifles planning, and so they set out, hundreds of thousands of distracted human beings, in a terrible mass migration. Between them and their goal—the safety of Indian territory—lay the Himalayas, unsurmountable save for an occasional wild caravan route. Perhaps 400,000 reached Indian sanctuary, perhaps 100,000 died on the way. There can be no accurate statistics for such terrible journeying, no record of the number who perished from disease, from starvation, from exhaustion; nor indeed, of those who, having reached India, soon died from the effects of their journey.

After Mandalay became a bomb-wrecked, fire-gutted shambles, the greatest concentration of these afflicted people was at Myitkyina, high in the mountains, the most north-westerly railhead in Burma. It was here that the magnificent work of the air transport crews reached the peak of their achievement in the relief of suffering. No. 31 Air Transport Squadron, R.A.F., had been made available to Stevenson's command, first with DC-2 aircraft and later with Dakotas (the military version of the DC-3). Seven members of the R.A.A.F. then served as aircrew with

this unit. Three of them—Sergeants Akers,[6] Hauser[7] and Perkins[8]—were mentioned in despatches for devotion to duty in the Burma campaign. Though singled out, these men were typical. Until late in April the unit had been based at Dum Dum, but now, since Myitkyina was their only reasonably safe terminal and the focal point for their missions, they were based on Dinjan in north-eastern Assam. Their operations were beset continually with difficulty. On the 28th only two sorties could be flown because the fuel pumps were out of order with water in them and the work had to be done by hand. The aircraft took off so heavily laden that their pilots often had difficulty in clearing the trees at the end of the runway, but there were no accidents. The daily serviceability rate was only about three aircraft. The evacuation of wounded and the dropping of supplies to the fighting troops had priority; then came the dropping of supplies along the three routes being followed by the civilian refugees, and the evacuation of as many of them as could be lifted from the concentration points.

Late in April the R.A.F. squadron was joined by an American air transport organisation with 13 civil aircraft. Their crews made a magnificent contribution. Chinese aircraft and the redoubtable Lysanders also helped by dropping supplies.[9] The crews undertook a three-fold struggle —against insufficiency, enemy pressure and time. They flew unarmed and usually through dense cloud to avoid fighter interception. They crossed mountain ranges, the peaks of which rose to 17,000 feet. They flew so many sorties that maintenance (or rather lack of it) became something of a nightmare. It was not unusual for a R.A.F. Dakota to have different power ratings for its two engines or for the propellers to be of a make never intended for this aircraft. The number of sorties was increased at the crews' own request after they had seen refugees dying beside the runway. Loadings reached the maximum in daring—even to the fantastically high rate of 71 passengers in an aircraft designed to carry 24. And, apart from the pressure of the enemy, the monsoon period was approaching and the task became a tense race against the rains.

On 6th May, the worst happened. As the first two R.A.F. Dakotas for the day were loading refugees enemy dive bombers swept down over Myitkyina aerodrome. Their bombs killed two women and a child and, as the remaining passengers leaped from the aircraft and fled for cover, the enemy planes returned to rake the airfield with gunfire. The same day they came again and destroyed two Dakotas on the ground. Even so the pilots of the remaining transports decided on one more sortie each at dusk. These were achieved safely but they were the last; early next morning Myitkyina belonged to the enemy.

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[6] F-Lt S. C. Akers, 400767. 31 Sqn RAF, SEA Air Cd 1943-44, and 36 Sqn. Clerk; of Essendon, Vic; b. Moonee Ponds, Vic, 26 Apr 1917. Killed in action 3 May 1945.

[7] F-Lt R. Hauser, 401168. 31, 353 Sqns RAF and 34 Sqn. Sharebroker's clerk; of Brunswick, Vic; b. Brunswick, 16 May 1916.

[8] F-Lt A. R. Perkins, 407035. 223, 24, 45, 215 and 31 Sqns RAF. Fitter's mate; of Semaphore, SA; b. Semaphore, 15 May 1917.

[9] The aircraft lifted a total of 8,616 refugee and military passengers, including 2,600 wounded, the American transports carrying about one-half of the total. They also dropped more than 109,500 pounds of supplies to the army column and to the refugees.

Still striving to aid the army in Burma, the Blenheim crews had been ranging right across Burma as when, on 24th April, three aircraft of No. 113 Squadron (now based on Asansol, 110 miles north-west of Calcutta), two of them piloted by Australians—Flying Officers Bassingthwaite and Hanson[1]—bombed positions at Sandoway and Taungup on the Arakan coast and damaged an armed sloop at sea. Bomber reinforcements had reached India on 13th April when No. 215 (Wellington) Squadron, in which a number of Australians were serving, landed at Asansol. On 7th May a detachment from this unit was diverted to assist No. 31 Squadron in supply-dropping operations. In mid-May, too, No. 60 Squadron began operating again with its own aircraft. They joined in the final air effort to support General Alexander's forces over whose positions Bassingthwaite and his crew made a notable reconnaissance flight on the 8th. This was a special mission to relate the positions of the British and Japanese troops. They found Alexander's force to the south-east of Kalewa and, by drawing anti-aircraft fire, located the forward Japanese troops at Ye-u. These continuous sorties were not without cost, in which the Australian crews of No. 113 Squadron shared. On the 19th one crew—Flying Officers Hickey[2] and Rogers[3] and Flight Sergeant Campbell[4]—failed to return from a raid on Akyab on which there was fierce interception by Zeros, and were posted missing believed killed. Four days later another Australian crew—Flying Officers Pearse[5] and Grigg[6] and Flight Sergeant Germein[7]—were all killed; the wreckage of their aircraft was found in the Chin Hills after an attack on craft on the Mayu River. Between 8th April and 20th May the squadron had flown more than 90 sorties.

When, on 20th May, General Alexander's forces reached Imphal, their long fighting retreat ended, and with it the task of the always undermanned and under-supplied air units that had striven so hard to support them. But their struggle continued.

China now had no land communication with the outside world save the age-old Silk Road that traversed the Turkestan Desert to Russia—a route of no practical value because of Russia's intense pre-occupation with the German invasion. Thus, for a supply-line to China there remained only the air transport service across the Himalayan "Hump". For the rest of 1942 the men who began this service—the Assam-Burma-China Ferry—and who in doing so prepared the way for the more highly

[1] F-Lt G. W. L. Hanson, 400986. 113, 31 Sqns RAF and 38 Sqn. Bank clerk; of Wangaratta, Vic; b. Melbourne, 12 Feb 1921.

[2] F-O M. M. Hickey, 406527; 113 Sqn RAF. Estate agent; of Mt Lawley, WA; b. Perth, WA, 19 Dec 1915. Killed in action 19 May 1942.

[3] F-O R. L. Rogers, 407276; 113 Sqn RAF. Clerk; of Underdale, SA; b. Wolverhampton, Eng, 17 Feb 1921. Killed in action 19 May 1942.

[4] F-Sgt E. B. MacK. Campbell, 406139; 113 Sqn RAF. Jackeroo; of Mullewa, WA; b. Perth, WA, 19 Mar 1920. Killed in action 19 May 1942.

[5] F-O E. F. K. Pearse, 406490; 113 Sqn RAF. Pastoralist; of Mt Magnet, WA; b. Geraldton, WA, 27 Aug 1912. Killed in action 23 May 1942.

[6] F-O C. D. Grigg, 406382; 113 Sqn RAF. Civil engineer; of Fremantle, WA; b. Fremantle, 16 Jan 1914. Killed in action 23 May 1942.

[7] F-Sgt J. F. Germein, 407362; 113 Sqn RAF. Clerk; of Berri, SA; b. Renmark, SA, 11 Jul 1921. Killed in action 23 May 1942.

organised American Air Transport Command service which took over in December, fought a battle with nature at her worst. But in eight months their aircraft carried from Dinjan to Kunming passengers, petrol, oil, bombs, ammunition, medical supplies, food, aircraft parts, a jeep and even two trainer aircraft that had been disassembled—a total of more than 1,400,000 pounds.[8]

In the first stage of the Burma campaign the performance of the Japanese air units was in very marked contrast with that of the Malayan campaign and it fell considerably short of their command's somewhat pompous directive:

> First the air units will destroy air power in Burma and gain air superiority and at the same time cut off the enemy communication route in the Malay area. In the ground operation the air corps will cooperate in annihilating the Burma Army and also the Chinese Army which is expected to invade from the south-eastern China. [Then came a qualification.] When the air corps cannot use too much power in the Burma area on account of the Southern Malay operation . . . [it] . . . will continuously destroy the landing area of enemy airfields and decrease the activities of enemy air power. This will be repeated over and over on Victoria Point and Rangoon. When the military strength of the Southern Malay operation is available, a crushing blow will be dealt on the airfields at Victoria Point and Rangoon at the opportune time.

At the outset the Japanese had 150 aircraft disposed on airfields in Thailand—insufficient, it proved, to master the A.V.G. and R.A.F. These were from units originally allocated to the *5th Air Division* for the Philippines invasion but diverted to Thailand to support the *XV Army* in Burma. When, about the end of the first week in January, the *5th Air Division* itself was freed by the collapse of American resistance in the Philippines, it moved to Thailand and brought the Japanese aircraft strength for the Burma operations to about 300. This was still insufficient for, until the large-scale attack on Rangoon began on 23rd January, this force contented itself mainly with night bombing.

Meanwhile the *XV Army,* pressing back the British ground forces in the Tenasserim Peninsula, were complaining because the Allied air operations were so vigorous that the *33rd* and *55th Divisions* could move only by night. With the fall of Singapore the strength for the "crushing blow" —units from the *3rd Air Division,* including a fighter brigade (the *12th*) —was released, but the ground forces had to capture Rangoon before the air units could become effective. Thereafter the *5th Air Division* was able to maintain a series of fierce assaults on the now very vulnerable Allied air bases to the north. To keep pace with the *XV Army's* advance, units of the *5th Air Division* moved with the Akyab expeditionary force which left Rangoon on 14th April and on 4th May they occupied the Akyab airfield. "The enemy had retreated before the attack could be made," one Japanese account stated, adding, "although the natives welcomed us the enemy planes counter-attacked often." In the reports of

[8] Craven and Cate, *The Army Air Forces in World War II,* Vol I, p. 508.

the air operations in July and August there was a significant change of tone, thus: "The English Army strengthened their defensive positions in India during our operations in Burma. The English forces in north-west India were transferred to the eastern boundary area. The American Army was strengthening its air force units consisting mainly of bombers. A few have arrived but more reinforcements are anticipated in the future. Looking at the . . . situation it was thought better to take the initiative, especially to capture the important airfields in eastern India. The Army would make preparations and researches on the India operations which would commence some time in August under the command of the Southern Army. . . . However, the battle situation in the South Eastern Pacific became serious. Imperial Headquarters gradually selected and took troops from the army, especially from the force transport unit. They were sent to New Guinea; therefore the quick application of the plan became difficult."

On 10th July the *3rd Air Army* was formed with headquarters in Singapore. The *5th Air Division* was the nucleus of this force, which controlled air operations in Burma, Malaya and the Sumatra-Java areas. A majority of the air regiments (five fighter, two light bomber, three heavy bomber and two reconnaissance units) were allocated to the Burma campaign.[9]

In India the monsoon had come and with it a sullen quiet. The enemy doubtless had much to do to consolidate his hold on Burma, and while torrents of rain made the movement of armies virtually impossible and curtailed air operations, Wavell's staff worked day and night to complete a task he gave them in April—the preparation of a plan for the reconquest of the whole of Burma. His instructions included the provision of "airfields and the maintenance arrangements for a large air force . . . since air superiority was the first requisite for operations against Burma by land or by sea".[1]

Meanwhile the depleted fighter forces which had been evacuated from Burma were being re-formed hastily to provide Calcutta with air defence. However, one of the greatest shortages in Bengal at that time was of all-weather airfields. Temporary or "kutcha" landing strips, although easily constructed, could not be used once the monsoon rains started.

Some idea of this shortage of all-weather landing strips can be gained by describing the ingenious use of a main road in the centre of Calcutta as a runway. The expedient of using Red Road, as it was called, which ran through the middle of the central park of the city, proved a great success during and after the monsoon rains in 1942. Two statues were removed from the road to give approximately 1,100 yards of unrestricted

[9] The *3rd Air Division* moved to China at this stage and stayed there for the remainder of the war.

[1] Wavell, *Operations in Eastern Theatre, based on India, from March 1942 to December 31, 1942*, para 27.

runway though with a bend of about five degrees along its length. It was, of course, narrow by comparison with an ordinary runway and was amply cambered, a fact which demanded particular care on landing as it aggravated any tendency to swing. A further flying hazard was the heavy ornamental balustrade which had been built on either side of Red Road's narrow grass verge. Use was also made of the tree-lined side roads in the park for dispersing the fighter aircraft based on it. The pilots found it quite novel to take meals in restaurants in Chowringhee, the main street of Calcutta, yet still be able to meet the time requirements of fighter readiness.

For many months the road was used this way without a single accident. At a later stage in its life as an airfield the balustrade began to look somewhat the worse for wear as a result of encroachments by aircraft with "a poor sense of direction". Later still, Red Road was to become a maintenance airfield and be enlarged by taking in a grass area of the park as a runway for dry weather use. During this time even twin-engined aircraft could be seen letting down to land on this airfield in the middle of a city.

While the enemy's air effort in the next few months was almost negligible except for isolated raids, the Allied air forces under Air Marshal Peirse as Commander-in-Chief maintained a series of harassing raids. These operations were conducted for the most part in appalling weather. Norgroup had been re-formed as No. 221 Group (on 12th March) with Stevenson as A.O.C. of all bomber and fighter units in north-east India.

There was, too, the United States Tenth Air Force whose commander, General Brereton, had established his headquarters at New Delhi to be close to Wavell's headquarters. The force itself was being assembled at Karachi, chosen because Calcutta was no longer a safe port of entry. Brereton's force had only 10 Kittyhawks and a handful of heavy bombers. The Kittyhawks had come with the crews, ground staff and such administrative units as were available. Having left Australia on 22nd February they were diverted to India while on their way to Java, reaching Karachi on 12th March. As for heavy bombers the Tenth Air Force had, in these days, only the 5 Flying Fortresses and one Liberator which Brereton had brought with him from Java, and two more Fortresses ferried in from Africa. Others were somewhere on the way, and some of them did arrive, but often with their engines so worn from the long flight across Africa to Karachi that they needed replacing.[2] The combat capacity of the Tenth was thus extremely limited at this time. Some of the heavy bombers were put to work immediately as transports—they took 29 tons of supplies and an Indian regiment from Asansol to Magwe and brought out more than 400 civilian refugees on the return flights. But few aircrew had yet had any operational training and Brereton refused to commit men to combat until this training had been completed. "I had had enough of fighting in

[2] Craven and Cate, Vol I, pp. 493-5.

dribbles," he wrote in his diary on 28th February; "I insisted on building a striking force with a punch to it."[3]

Karachi, moreover, was 1,000 miles from the combat area, and this set many problems. One of these was transport. The Indian railways were short of rolling stock and there were four different gauges; the roads were practically useless for heavy traffic in the monsoon season; there were too few boats to gain much aid from the great waterways, the Ganges and the Brahmaputra, and much aerodrome construction had to be done before an air force of any size could operate effectively from that part of India.

On the night of 2nd-3rd April Brereton had relaxed his decision not to commit his force when he received a report from Wavell's headquarters of enemy shipping lying in the harbour at Port Blair, out of range of the Blenheims. Brereton led an attack himself, his aircraft bombing in bright moonlight, and his crew claiming a direct hit on a cruiser. A transport was also hit and both ships were left burning. The enemy anti-aircraft fire was heavy and two of the bombers were damaged but all returned. Two other Fortresses were ordered to raid Rangoon on the same night but one crashed on take-off, killing all the crew, and the mission was cancelled.

This then was about the measure of Brereton's force and sharp harassing raids were all that could be undertaken. The plan was to build it up to a strength of 10,000 officers and men with an ultimate increase to more than twice that figure. Its initial mission was to support General Stilwell's Chinese force in China and Burma; its ultimate purpose to operate against the enemy's lines of communication and to launch direct air attacks against Japan from bases in China.[4]

At this stage American plans for developing air strength in China included the induction on 4th July of the A.V.G. into the U.S.A.A.F. as a full American pursuit group operating in China.[5] This would form the beginnings of the China Air Task Force (C.A.T.F.), a force to be assigned to the Tenth—but under Chennault's command. On 2nd June a flight of six Mitchells earmarked for the C.A.T.F. arrived at Dinjan. They left early on the 3rd to bomb Lashio on their way to Kunming. Their attack was made but only two reached Kunming; three crashed into a mountain in heavy overcast at 10,000 feet and one was abandoned when it ran out of fuel. Six more Mitchells reached Kunming safely within the next fortnight, several of them flown by pilots who had taken part in the Doolittle raid.

In their last day of combat—4th July 1942, "induction day"—the A.V.G. pilots shot down five more enemy fighters without loss. This

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[3] *The Brereton Diaries*, p. 106. About this time Brereton recommended to General Arnold that in future all crews should be fully trained and equipped before being sent overseas, whatever the cost in delay.—Craven and Cate, p. 496.

[4] Brereton, pp. 109-110.

[5] The AVG contracts were due to expire on 4th July and no more action was planned after that date.

brought their claims to 299 enemy aircraft destroyed and 153 probably destroyed for a loss of only 12 Kittyhawks in combat and 61 on the ground, including the 22 which had to be burned at Loiwing. Four pilots had been killed in air combat, 6 by anti-aircraft fire, 3 by enemy bombs on the ground and 3 had been taken prisoner. Ten had died as a result of flying accidents. So ended a dramatic and gallant air venture which began with a call for mercenaries and ended with a group of aviators trained to fight with skill, determination and courage. Only five pilots and a few ground staff elected to stay with the A.A.F. in China though 20 pilots agreed to remain till replacements arrived.

By the end of June the Tenth Air Force had 600 officers and 5,000 enlisted men. One Mitchell squadron and 4 fighter squadrons were at Kunming, 2 heavy-bomber squadrons were at Allahabad, the advance parties of 2 fighter squadrons were at Dinjan, and another medium bomber squadron was expected to begin operating from Andal at the end of the monsoon. But this promising increase in strength was not to be used for the reconquest of Burma. The Middle East and Far East theatres were regarded by the Combined Chiefs of Staff as interdependent, and Rommel's forces in Africa were gaining ground to such an extent that on 23rd June Brereton received orders to go to the Middle East with all available bombers and assume command of the American forces there. He was authorised to take all needed staff, all the transport and aircraft required, and to appropriate what might be needed from India-bound cargoes passing through the Middle East. On 26th June he left India, soon to be followed by the heavy bombers. His successor, Brigadier-General E. L. Naiden, was left with a "crippled air transport system, a skeleton staff and virtually no combat strength outside the task force in China".[6]

Air Marshal Peirse's command meanwhile was using the monsoon in every way possible, keeping up a steady assault on the enemy's communications and building up air strength behind the weather curtain. The Japanese Air Force remained very quiet except in defence when its main bases were raided—notably Akyab, Magwe, Kalewa and Mandalay, which appeared in that order of importance on the R.A.F. strike records. In the second half of 1942 about 25 per cent of the aggressive effort of Peirse's force was directed at Akyab. At the beginning of July Air Commodore Hunter was placed in command of No. 221 Group at Chittagong and No. 224 Group was re-formed at Calcutta to control all fighter units.

The achievements in this period were considerable. When set alongside those for the period of the Burma retreat the operations records were impressive. The strikes ranged from single aircraft sorties to attacks by 24 bombers with 12 fighters as top cover. An example of the major attacks was one on Akyab Harbour on 9th September when 13 Blenheims from Nos. 60 and 113 Squadrons and 6 Hudsons from No. 62 Squadron

[6] Craven and Cate, Vol I, p. 513.

made a low-level approach and obtained four direct hits on ships and damaged the wharf. Enemy fighters intercepted as the bombers were leaving the target area and the cost was heavy—5 bombers—though not all the crews were killed. Two Australians in one Blenheim—the pilot, Flight Sergeant Reid,[7] and the navigator, Sergeant Wilson[8] (who was serving as a member of the RAF)—were taken prisoners.[9] Their aircraft was shot down into the sea four miles off Akyab Island, after having been set on fire by machine-gun fire from a ship in Akyab Harbour and cannon shells from Japanese fighters. Despite being wounded and blinded, Sergeant L. A. White, R.A.F., the wireless operator-air gunner, was able to launch the dinghy. They were captured by Japanese 22 hours later, north of Akyab, and had what Reid described later as the "uncomfortable experience of being held for a time in the same building as the Jap survivors of the crew of the ship we had helped to sink".

One of the original Australian pilots of No. 113 Squadron, Flying Officer Loane, and two other Australians, Flight Sergeants Bell[1] and Barnard,[2] failed to return and were posted missing as were the crew of another Blenheim in the same flight with whom an Australian, Sergeant Hall,[3] was the wireless operator-air gunner. One of the four Hudsons was shot down by fighters and another crashed and was wrecked when landing at Chittagong. An aircraft flown by one of No. 113 Squadron's original crews—Bassingthwaite, Gordon and McKerracher—was so severely damaged by gunfire from the attacking fighters that the pilot had to make a forced landing at Dum Dum.

The crews of Nos. 113 and 60 Squadrons made an incisive attack on railway facilities at Mandalay on 12th September. In October No. 113 Squadron at last received some new aircraft—Bisley Mark Vs.

Among the fighter units morale was also very high. Flight Lieutenant Cotton, who had returned to combat duty in October after recovery from wounds received eight months earlier, in November was given command of his old unit, No. 17 (Hurricane) Squadron. That month No. 17 began intensive night-interception practice over Calcutta.

The appearance of a squadron of Liberator heavy bombers (No. 159), three aircraft from which made the unit's first attack on 17th November, was an indication of slow but progressive increase in striking power and, most important, in range. Air Vice-Marshal Stevenson led the Liberator flight in to attack Mingaladon as pilot of one of the three aircraft.

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[7] W-O J. P. F. Reid, 404362; 113 Sqn RAF. Civil flying trainee; of Brisbane; b. Brisbane, 21 Feb 1921.

[8] Sgt P. K. Wilson, 1252303, RAF; 113 Sqn RAF. Grazier; of Barraba, NSW; b. Armidale, NSW, 17 Oct 1914. Killed in aircraft accident, 1958.

[9] In April 1945 Wilson escaped in Rangoon and with the aid of a friendly Burmese made his way through the Japanese lines to the British front at Pegu. Reid was released soon afterwards when the Japanese guards quit their posts at Rangoon gaol.

[1] F-Sgt T. Bell, 402184. 211 and 113 Sqns RAF. Articled clerk; of Mosman, NSW; b. Neutral Bay, NSW, 17 Aug 1919. Killed in action 9 Sep 1942.

[2] F-Sgt R. E. Barnard, 404464; 113 Sqn RAF. Grazier; of Broadbeach, Qld; b. Rockhampton, Qld, 24 Jan 1913. Killed in action 9 Sep 1942.

[3] Sgt G. R. Hall, 401034. 36, 60 and 113 Sqns RAF. Clerk; of Elwood, Vic; b. Elsternwick, Vic, 17 Mar 1922. Killed in action 9 Sep 1942.

With him as second pilot was an Australian, Pilot Officer Muirhead.[4] The bombs were well on the target and fires were burning in the area as the bombers turned back. Then on the following night another new unit, with bombers new to the command—No. 99 (Wellington) Squadron —began operations with an attack by eight aircraft on Meiktila.

Late in November a Blenheim of No. 60 Squadron piloted by Flight Lieutenant Morphett[5] took Major-General Wingate,[6] leader of the Chindit operations behind the enemy's lines, on an aerial reconnaissance of the territory in Burma selected for the first of his ventures.

Enemy fighter interception increased sharply and as the year was ending they also began counter-raiding. On 5th December 24 bombers escorted by about 12 fighters attacked Chittagong but the bomb aiming was very poor and the damage slight. On the other hand the largest raid the R.A.F. had yet mounted was made on Mandalay's railway yards on 7th December by 24 bombers covered by 20 Hurricanes. Stevenson again flew in the leading aircraft.

The raid on this target (Mandalay) was repeated on the 12th with the A.O.C. flying with Bassingthwaite who was now a flight lieutenant. There were 19 other Australian aircrew on the operation. The railway installations were heavily bombed and Stevenson in messages to the units that took part said he was "tremendously impressed by the high war efficiency . . ." adding "I shall not, repeat not, forget."

[4] F-Lt M. J. C. Muirhead, 407724. 159 and 355 Sqns RAF. Medical student; of Adelaide; b. Adelaide, 6 Jul 1920.

[5] Sqn Ldr J. E. Morphett, DFC, 407533. 60 and 159 Sqns RAF; comd 355 Sqn RAF 1943-44. School teacher; of Kingswood, SA; b. Norwood, SA, 25 Feb 1911.

[6] Maj-Gen O. C. Wingate, DSO. Comd Long Range Penetration Groups, Burma, 1943-44. Regular soldier; b. Naini Tal, United Provinces, India, 26 Feb 1903. Killed in aircraft accident 24 Mar 1944.

CHAPTER 26

CORAL SEA AND MIDWAY

DURING March it had become apparent that the enemy were greatly increasing their pressure on the eastern sector of their great equatorial front—a front that now stretched for 4,000 miles from the northern waters of the Indian Ocean, eastward into the Coral Sea. It was clear, too, that their purpose was twofold—a determined thrust against Papua and the Australian Mandated Territory of New Guinea, which, if successful, might allow them to strike at the very heart of the Allied defences on the Australian continent; and an advance along the Solomon Islands chain which, fully developed, could provide a springboard for action to sever the Allies' South Pacific supply route. The two thrusts would be complementary in that each would strengthen and could, if need be, directly support the other. Rabaul was ideally situated at the hinge, for the New Guinea mainland was less than 450 nautical miles away to the south-west, and the Solomon Islands chain stretched away to the south-east.

By the end of the month the advance in the Solomons had, in fact, begun. On 30th March a Japanese naval landing and airfield construction force had gone ashore at Buka, the nearest island in the group and only 170 miles from Rabaul. A fighter strip was quickly constructed there. Also, on 30th March an occupation force seized Kieta on the east coast of Bougainville, then Faisi in the Shortland Islands to the south, and, on 7th April, Buin, a usefully placed base on the southern tip of Bougainville. A diversion to provide cover for operations against New Guinea was made on 8th April when a Japanese force took Lorengau on Manus Island in the Admiralty Group, a commanding position at the northern extremity of the Bismarck Sea. All these enemy moves were unopposed, though each was closely observed and reported in detail by one or more of that redoubtable band of Australian coastwatchers who were providing a front-line Intelligence service of immeasurable value.

Between Bougainville in the north-west and San Cristobal in the south-east, the Solomon Islands lie in two parallel lines separated by a deep, unobstructed waterway (later to become known as "The Slot"). At the southern end of this strait and roughly in the centre of a triangle formed by Ysabel, Malaita and Guadalcanal Islands lies Florida Island, with Tulagi, two miles long and half a mile wide, lying off its south coast to form Tulagi Harbour. The capital of the British Solomon Islands, Tulagi, with its deep, well-sheltered anchorage and commanding location, had long been regarded as an advanced base of consequence in the defence of New Guinea and north-eastern Australia; to the Japanese it seemed a useful base for operations against New Caledonia and Fiji. Its physical relation to Guadalcanal was important, for on the northern

fringe of the larger island there was a substantial area of grassy, black-soil plain suitable for the construction of airfields. At the eastern side of Tulagi Harbour two small islands—Gavutu and Tanambogo—each about twelve acres in area and joined by a coral causeway, were well suited for base installations.

On Tulagi itself there was a small British garrison of about 100 native troops commanded by a British officer. On Tanambogo the R.A.A.F. had a signals staff to cope with the radio communications and a marine staff to tend the Catalinas using the base for long-range reconnaissance. With their close companions in arms, a detachment of the 1st Independent Company, A.I.F., the force numbered in all about 50 officers and men. The men had busied themselves with a deception plan. Old clothes were hung on the washing lines of deserted houses, an obsolete boat was tied up at a jetty, and a dummy float-plane contrived from galvanised iron and fuel drums was moored off shore. These and the very conspicuous lattice-work radio mast of the rather ineffective and obsolete Tulagi radio station (the R.A.A.F. station on Gavutu carried the burden of the signals traffic) attracted most of the attention of the early Japanese air raiders. Beginning late in January with a single raid by a flying-boat, these attacks had mounted in number, until, after several weeks, they had become an almost daily occurrence, with twin-engined bombers from Rabaul joining in. Thereafter the decoys lost their effect. Bombs destroyed the R.A.A.F. airmen's mess and living quarters and the base store. Though damaged several times, the radio transmitters on Gavutu were kept in operation.

In anticipation of the occupation of Tulagi the British Resident Commissioner, Mr Marchant,[1] had moved his small garrison to Malaita where he endeavoured to maintain British control over the natives while remaining in radio contact with surrounding bases and stations.

On 1st May the little garrison on Gavutu and Tanambogo received a particularly heavy air attack. Enemy bombers came in without warning and seriously damaged two of three Catalinas lying at their moorings. A R.A.A.F. marine section launch picked up the crews, several members of which had leaped into the sea to avoid being trapped should their aircraft take fire. The instrument panel of one of the Catalinas had been smashed beyond use but the captain, Pilot Officer Townsend,[2] succeeded in taking off and flying it safely back to the main flying-boat base at Rathmines, New South Wales. The other damaged aircraft, captained by Flight Lieutenant Ekins,[3] was towed to the Guadalcanal coast where, after vain efforts to hide it, it was destroyed, the crew crossing to Noumea, first using a lugger and then being picked up by an Allied naval vessel.

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[1] Lt-Col W. S. Marchant, CMG, OBE. Resident Commissioner British Solomon Islands Protectorate 1939-43; Chief Native Commissioner Kenya Colony 1943-47. B. 10 Dec 1894. Died 1 Feb 1953.

[2] Sqn Ldr V. E. Townsend, DFC, 407015. 11 Sqn; Trans Pacific Air Ferry Service 1943; Chief Flying Instructor 3 OTU 1944-45; SO Operations HQ Eastern Area 1945. Cashier; of Parkside, SA; b. Mt Torrens, SA, 17 Dec 1916.

[3] Sqn Ldr K. C. H. Ekins, 241. 11 and 9 Sqns; comd RAAF Detachment HMAS *Westralia* 1940-41; Snr Controller HQ North-Eastern Area 1943; Controller 9 Gp and 71 Wing 1943-44. Regular air force offr; of Pymble, NSW; b. Neutral Bay, NSW, 12 Mar 1917.

That night two more Catalinas arrived at Tulagi. One of them, piloted by Pilot Officer Miller,[4] had flown from Townsville and the other, with Flying Officer Norman in command, from Port Moresby. When a short distance south of New Georgia, Miller and his crew sighted a small ship laden with troops, and some smaller craft, moving on a course for Tulagi and escorted by a naval vessel which fired on the Catalina but without effect. The Catalina that had escaped damage in the air raid went out next morning to shadow the enemy ships. Its captain, Flying Officer Hirst,[5] reported eight enemy vessels about 35 miles off Tulagi. One ship was attacked without success. Leaving a small detachment of R.A.A.F. and A.I.F. troops as a demolition squad, the main garrison party then boarded a 28-ton copra trading lugger, the *Balus,* in which they put into a small inlet on the coast of Florida Island.

Throughout 2nd May the Tulagi base was heavily bombed and strafed, the enemy apparently anticipating resistance. A coastwatcher on Savo Island, having reported that enemy ships were in sight, lit a warning flare and, that night, after learning that enemy warships were shelling Auki on the west coast of Malaita, the demolition party completed their task, leaving all the buildings in flames except the hospital which was not demolished. They then boarded a launch and joined the main party in the *Balus,* crossing with them to Marua Sound at the eastern end of Guadalcanal where 22 members of the A.I.F. were picked up. Although an enemy float-plane circled over the lugger on two occasions there was no attack and the *Balus,* after initial contact with Port Moresby, sailed in radio silence and eventually reached Vila in the New Hebrides where the R.A.A.F. and A.I.F. parties, who had escaped without casualties, boarded the armed merchant cruiser *Manoora* and were taken to Sydney.

About 6 a.m. on the 2nd Miller had just taken his Catalina off from Tulagi on a reconnaissance flight when the enemy bombers swept in over the base. Undetected by enemy aircraft the crew listened for more than two hours to the coastwatcher's reports of further assaults by both bombers and fighters, though the base had been completely evacuated. On the 3rd Japanese troops went ashore and took possession.

The disposition and activity of the enemy forces in the north-eastern sector of the S.W.P.A. had greatly increased the importance of Port Moresby as a reconnaissance base. Every available R.A.A.F. Hudson and Catalina, all the American Mitchell bombers, and even two Fortresses from the small and precious heavy bomber force were engaged in searching the island-studded area, using Port Moresby either as a base or a staging point. The aerodrome became seriously congested and the limited number of Intelligence officers interrogating incoming crews and collating all the information received were heavily burdened. Other symptoms of

[4] F-Lt C. W. Miller, DFM, 255140. 11 Sqn; Trans Pacific Air Ferry Service and Instructor 3 OTU 1943-44; comd 111 ASRF 1945. Clerk; of Caulfield, Vic; b. Geelong, Vic, 11 Jan 1917.

[5] F-Lt R. M. Hirst, DFC, 273184. Qantas Merchant Air Service, 20 and 21 Sqns; Instructor 3 OTU 1943-44; Trans Pacific Air Ferry Service 1944. Commercial pilot; of Strathfield, NSW; b. Strathfield, 25 Feb 1917.

tension were the sharp increase in enemy radio signals traffic to and from Rabaul and the intensification of air raids on Port Moresby which, for Allied bombing operations now became unsafe except as a staging base.

On 4th May the crews of Allied reconnaissance aircraft reported a concentration of "19 enemy transports with attendant warships" in Simpson Harbour, Rabaul, and that day the crew of a Mitchell of No. 90 Squadron reported having sighted a Japanese aircraft carrier and two heavy cruisers.[6] Contact with this force was lost when the Mitchell was driven off by a swarm of enemy fighters. In the same area, over the Coral Sea to the south of Bougainville, the crew of a R.A.A.F. Catalina captained by Flying Officer Norman signalled that they were being attacked. No further word was received from the flying-boat, which failed to return. The R.A.A.F. thus lost another precious crew and a valuable aircraft.[7] Next another Mitchell crew reported the sighting of an enemy aircraft carrier to the south of Bougainville. They shadowed it for more than an hour, transmitting a homing radio signal in the hope that a striking force of Flying Fortresses might follow it direct to the target, but there was no response. A Catalina crew of No. 11 Squadron captained by Flight Lieutenant Fader,[8] also reported an enemy force in this area where Norman had been lost. They described it as "probably two heavy cruisers and a seaplane tender". The crew of another Catalina of No. 20 Squadron commanded by Squadron Leader Atkinson[9] reported "a seaplane carrier of about 7,000 tons" to the north-east of Rossel Island in the Louisiade Archipelago and two merchant ships to the south-east of the carrier's position. Farther to the east the crew of a Mitchell sighted an aircraft carrier and two heavy cruisers off the south coast of Guadalcanal.

With Port Moresby under grave threat the defenders of the base had no illusions. Initially it had been intended that, in the face of invasion from the sea, the ground forces would defend the base from the coastline. When news of the approach of the enemy invasion forces was confirmed the Army Command decided that the forces available were too few to be effective for such a defence plan and so, with the enemy only about 12 hours' steaming away, a contracted line was prepared seven miles inland. Wing Commander Gibson, commanding the R.A.A.F. Station, called a staff conference, discussed the situation, and then composed a movement order for evacuation. This movement was to begin only on his own written order or that of the senior administrative officer. It was to be made over

[6] The position of this enemy force is not given in available documents other than by the vague statement that it was "east of Port Moresby".

[7] The Catalina was comparatively slow and thus vulnerable to enemy fighters. Initially the crew of a Catalina numbered 8. In March 1942 a navigator was posted to each crew. In May, to meet the strain of long sorties, chiefly at night, the number was raised to 10 by the addition of a second navigator. Later a third pilot was added.

[8] Sqn Ldr N. D. Fader, AFC, 262045. 11 Sqn and instructor 3 OTU 1940-43; comd 9 Sqn 1943-44. Commercial pilot; of Elizabeth Bay, NSW, b. 26 Sep 1910.

[9] W Cdr R. A. Atkinson, DSO, DFC, 70030, RAF. 205 Sqn RAF; 20 and 11 Sqns; comd 11 Sqn and Chief Flying Instructor 3 OTU 1943; comd 248 and 235 Sqns RAF 1944. Mining engineer; of Sydney; b. Emmaville, NSW, 21 May 1913. Killed in action 13 Dec 1944.

the hills to the Laloki River, skirting the Seven Mile aerodrome, and thence to the army base at Koitaki where an operations room and signals station were already established. Some detachments were immediately withdrawn to this camp site and the signals station put into operation.

The frequency and variety of these air reconnaissance reports, some of them very conflicting, set MacArthur's staff a complex problem. But whatever else was in doubt there was no question about the direct threat to Port Moresby. It was clear from the sum of Intelligence reports that a strong enemy seaborne force had moved out from Rabaul and was on course for New Guinea, covered by a naval force that had put out from Buin. On the 6th a R.A.A.F. Catalina commanded by Squadron Leader G. E. Hemsworth, reported the sighting of two enemy destroyers to the south-east of Misima Island in the Louisiade Archipelago. Almost immediately afterwards they signalled that they were being attacked by enemy fighters. As with Norman's crew two days before, no further signals were received and the Catalina did not return.[1] That afternoon the crew of a Hudson from No. 32 Squadron, captained by Pilot Officer Pennycuick,[2] reported an aircraft carrier with one large transport and two destroyers off Misima and, later, four destroyers and three merchant ships in the same area. An attempt was made to strike at the enemy ships and three Fortresses attacked that afternoon but without success. Next day eight Fortresses returned to the assault. When they reached the target area the crews were somewhat puzzled to find that the enemy ships were withdrawing towards Rabaul. A direct hit on a large transport which they reported had been set on fire was the only claim made by the American crews, and enemy accounts of these attacks mention no damage to their ships.

Again on 8th May eight Fortresses attacked the enemy ships, but only two near misses were claimed. Eight Marauders, operating from the Townsville area and flying almost to the limit of their range, failed to find the target. Nineteen Dauntless dive bombers of No. 8 Squadron, of No. 3 Bombardment Group, which had moved to Port Moresby at the end of March, had been placed on stand-by ready to attack if the enemy ships came within range but they were not needed.

On the previous day the crew of one of four R.A.A.F. Hudsons on armed reconnaissance claimed two bomb hits on an enemy submarine in the Coral Sea to the south of the Louisiades. The submarine crash-dived leaving a patch of oil on the surface. When all the reconnaissance reports received on the 9th had been sifted they gave a sighting total of 25 enemy vessels in the critical area—15 warships (one a seaplane tender), 7 transports, a tanker, and 2 submarines. Most of these ships, it seemed, belonged to the force that earlier had been moving threateningly towards Port Moresby but now was withdrawing. In their endeavour to repel and

[1] Enemy documents captured later indicated that this crew had been picked up by a Japanese ship, transferred to another ship, and taken to enemy occupied territory as prisoners of war.

[2] F-Lt P. J. E. Pennycuick, 403954. 7, 32, 1 and 94 Sqns; Instructor 1 OTU 1943-44. Bank clerk; of Mosman, NSW; b. Sydney, 29 Jul 1921.

destroy this force and in associated attacks on shipping MacArthur's air forces had initiated (apart from the limited number of R.A.A.F. strikes) 87 attack sorties—40 by Fortresses, 22 by Mitchells and 25 by Marauders. The results had been disappointing in some instances. Only 20 of the Fortresses, 4 of the Mitchells and 17 of the Marauders had reached their targets and these had not achieved any marked success.

A primary reason for this lack of success was the distance from base to target. Almost invariably this distance was the extreme range of the attacking aircraft. For the Fortresses and Marauders there were only three bases where the runways were long enough for take-off with full fuel and bomb-load—Garbutt (Townsville), Horn Island and Port Moresby. The advanced operational base at Cooktown offered some reduction in flight range but the aerodrome was suitable only for the Mitchells, which did operate from there. These restrictions meant that the aircraft had no reserve of fuel to permit a search for the ships that were to be the targets. Thus, unless the position of the target was almost precisely that for which the crews had been briefed, the visibility over the target was good (as it very rarely was), and the navigation of the aircraft was very accurate, the chances of a successful strike were remote. Delays occurred in the briefing and dispatch of the bomber crews and their interrogation on their return. These were due to the overcrowding of the only two airfields available to the Fortresses and Marauders; Port Moresby, as noted, was under almost daily air attack and therefore was unsafe except as a staging base. In this way the striking power of MacArthur's air force was seriously dissipated, and the need for more bases with more adequate facilities and for more long-range bombers with long-range fighters to give cover was heavily underlined.

It was clear that these land-based operations, though they had hindered the Japanese advance, had not been responsible for what proved to be the enemy's first noteworthy reverse since the war began: their withdrawal from a major offensive operation which, had it succeeded, would have very gravely endangered Australia and the Allied campaign in the Pacific. The real reason for the Japanese withdrawal had been almost completely hidden from the commanders of the Allied Air Force squadrons, who were unaware, until it was all over, that a series of fierce battles was being fought between Allied and Japanese carrier-borne aircraft, the squadrons from each side attacking the opposing surface ships. The challenge to the Japanese offensive had come from the Allied naval-air forces (chiefly American) in the South Pacific Area, and the first indication received at Port Moresby that these forces were in action in the Coral Sea came from the crew of a Mitchell who, on return from a strike against the enemy ships, reported that they had seen "other aircraft" attacking the Japanese vessels.

To gauge the extent and the effect of the Coral Sea battle it is necessary to turn back to February 1942. In that month the United States naval-

air forces in the Pacific first learned of the likelihood of a Japanese offensive drive through the Solomon Islands to New Caledonia and perhaps as far as Fiji. The warning was heeded and the planning of a counter-offensive began. By mid-April there was news of the concentration of enemy forces at Palau and Truk. Then the capture of Tulagi put the emphasis on the probability of a thrust through the Solomons, but it meant too that the Japanese had an additional vantage point for air operations against New Guinea and the east coast of Australia.

To meet the expected thrust an American task force, the key units of which were the carriers *Yorktown* and *Lexington,* accompanied by five cruisers and 11 destroyers, was in position 375 miles to the south of San Cristobal Island on 1st May.[3] Late on the 3rd Rear-Admiral Frank J. Fletcher, commander of the combined force, learned of the Japanese occupation of Florida Island and of the presence of enemy transports in Tulagi Harbour. He decided to strike. On 4th May, after a pre-dawn briefing, the pilots of *Yorktown*'s squadrons took off for the assault on Tulagi. In dive-bombing and torpedo attacks they sank a destroyer and several smaller craft and damaged several other ships, notably a minelayer.[4]

After the Tulagi attack Fletcher's force withdrew southward to keep a rendezvous with his support group which, operating under Rear-Admiral Crace,[5] commanding the Australian Squadron, included the two Australian cruisers *Australia* (flagship) and *Hobart.* Early on the morning of the 7th a strong formation of Japanese carrier-borne aircraft found the American tanker *Neosho* and her escorting destroyer, *Sims.* The aircraft sank the *Sims* and severely damaged the *Neosho,* which had to be sunk several days later. At 7 a.m. that morning the combined Allied force had reached a position about 120 miles south of the eastern extremity of the Louisiade Archipelago, where Crace's force, now including the American cruiser *Chicago,* was detached and sent north-west to the southern end of the Jomard Passage. Fletcher had learned of the movement of the enemy force towards Port Moresby and intended that Crace should block their way south from Misima Island.

Meanwhile *Yorktown*'s reconnaissance pilots reported sighting six enemy warships about 225 miles to the north-west. In the belief that the main enemy force of two carriers had been found, Fletcher sent off his entire air attack force from *Yorktown* and *Lexington.* The aircraft found the enemy carrier *Shoho* north-east of Misima Island. The dive bombers crippled her steering gear and then the torpedo-carrying aircraft scored several hits. The *Shoho* sank, taking with her about 600 of her complement and all her aircraft.

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[3] *Yorktown*'s complement of aircraft was 20 fighters, 38 dive bombers and 13 torpedo bombers. *Lexington* had 22 fighters, 36 dive bombers and 12 torpedo bombers.

[4] Understandably, the pilots believed that the enemy's losses from this attack were much greater, but their claims to having sunk or seriously damaged other and larger ships were not confirmed by later investigation.

[5] Admiral Sir John Crace, KBE, CB. (HMAS *Australia* 1913-17.) Comd HMS *Valhalla* 1928: Naval Asst to Second Sea Lord 1937-39; comd RAN Sqn 1939-42. Of Hawkley, Hants, Eng; b. Canberra, 6 Feb 1887.

Fletcher then took his force south and by quick movement again turned time to his advantage. Crace's force had no such advantage; his task took him well within range of aircraft based on Rabaul and, just before 2 p.m. on the 7th, when about 40 miles from the southern entrance to Jomard Passage, a wave of Japanese torpedo-carrying aircraft swept in. The attack was determined but faulty. The Japanese released their torpedoes at long range: 1,000 to 1,500 yards. By skilful handling the ships evaded them and shot down five aircraft. Fortune again favoured Crace's force when, soon afterwards, 19 heavy bombers attacked from 18,000 feet. Though several ships were straddled by bomb explosions, there was no damage. That these aircraft were almost certainly American bombers from Townsville was indicated later.

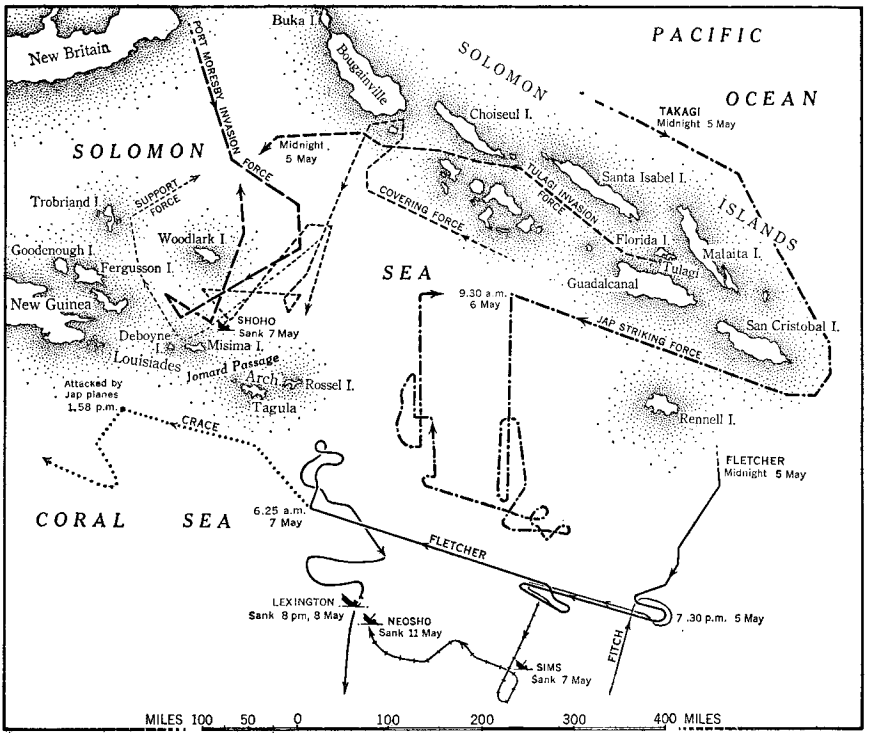
Fletcher's force was now well to the east, alert for any sign of the main Japanese carrier force which he suspected was within range. Early on the 8th May the opposing forces found each other through the eyes of their air reconnaissance crews. Fletcher's ships were about 180 miles south-west of the Japanese ships. There followed a fierce battle in which the American aircraft found and hit and severely damaged the carrier *Shokaku.*

For their own part the American carriers paid an equal if not a heavier price. Thirty-three Japanese dive bombers and 18 torpedo bombers attacked. *Lexington* received direct hits from two bombs and two torpedoes. *Yorktown* fared better. She received one direct bomb hit and there were a number of "near misses". In *Lexington* the ship's company behaved with great coolness. The vessel's trim was corrected and all fires extinguished. An hour and a half later she was steaming on course at 25 knots. Then, without warning, an internal explosion occurred and fires broke out between decks. Further explosions followed. Even so all the returning aircraft were taken safely on board. But the carrier had been mortally wounded and in the evening Rear-Admiral Aubrey W. Fitch, commander of the *Lexington* group, realising that she was doomed, gave the order to abandon ship. Most of the ship's company were saved. Once abandoned, one of the escorting destroyers sank the helpless carrier with torpedoes.

Though in actual loss and damage the honours in this battle were fairly even, the Allied forces had in fact achieved their most important success since the war in the Pacific began. The first great carrier-versus-carrier battle had been fought. It was unique as the first naval-air battle in which there was no aircraft-to-aircraft or ship-to-ship combat. The opposing ships neither sighted each other nor fired a single shot at each other. Yet the result was that the Japanese were forced to postpone their frontal attack on Port Moresby and delay their drive down through the Solomons.

On the side of the Allies the battle had revealed a fundamental weakness that might have had disastrous results and that was, in fact, responsible for the bombing of friendly ships by some of the Allied aircraft.

The forces under Fletcher's command did not receive the benefit of the Allied Air Force reconnaissance reports which might well have been a vitally important contribution to the battle. Apparently the sightings of enemy aircraft carriers and heavy cruisers on 4th and 5th May by the crews of reconnaissance aircraft from General MacArthur's command were not received by Admiral Fletcher, whose first knowledge of the exact whereabouts of these enemy ships was not gained until the 7th. The only apparent explanation for this serious fault is that the two commands were operating with a highly dangerous degree of independence, at least



Coral Sea Battle, 5th-8th May

as between the Allied units actually engaged in the battle. That this fault existed and was recognised after the event was indicated by MacArthur when, on 13th May, he reported to General Marshall in Washington that complete coordination with the naval forces had been achieved. The truth is that the two commands were, in effect, separately fighting the same enemy forces. One American historian, basing his interpretation on interviews with the group commander (Colonel Carmichael) and members of

No. 19 Bombardment Group, and other American operational documents, fairly states the case thus:

Men of the 19th Group were forced to admit that they attacked U.S. naval units, but they pointed to a reason. Few of them had received adequate training in recognition of surface craft as they fought through the Philippines and Java campaigns, but more important, none of the intelligence officers had any information as to the location of the friendly task forces; nor had any identification signals with surface craft been established beforehand. This lack of information on naval plans worked a very real hardship on the bombardment commanders. Prior to the May battle they were unaware either of the Navy's presence or of its plans. They knew only that occasionally they would be requested on short notice to cooperate in a naval operation, but because the striking force was widely scattered along the rail line between Townsville and Cloncurry, it was necessary to fly the aircraft some 600 to 800 miles to Port Moresby, where they were refuelled in preparation for the missions at dawn on the following day. However, it was necessary for them to reach Moresby by dusk for otherwise there was inadequate time for the refuelling necessary to comply with the Navy's request. These were difficulties which could be overcome with the passage of time, and for the most part they were overcome as the war progressed and as channels of communication between the Services were developed. But the results of the Coral Sea action left a sense of frustration among the A.A.F. crews who had participated in this engagement against the Japanese.[6]

Whatever lack of coordination between the Allied commands was disclosed by the Coral Sea battle, it is clear that the Japanese too had their own problems of coordination. These arose from the rival strategic concepts of the navy and the army. Documents relating to the campaign in the South-West Pacific compiled after the war ended reveal the army as conservative and the navy as venturesome at this stage. But, apart from one example of extreme thinking on the part of "a faction of the navy" (presumably a small faction) which from early in 1942 had in mind plans for the invasion of Australia—plans that were opposed as "clearly a reckless operation which would exceed the war strength of Japan"—the more adventurous policy of the navy had an understandable basis.[7]

As noted earlier, the army and the navy elements at Imperial Headquarters had agreed, as early as January 1942, to plans for the invasion of Port Moresby and Tulagi. In April the two Services had approved a plan to push their invasion forces right out into the Pacific with the inten-

[6] Craven and Cate, *The Army Air Forces in World War II*, Vol I, pp. 450-1.

[7] Colonel Takushiro Hattori. Chief of Operations, General Staff, Jan 1941-Dec 1942. Hattori commented further: "If Japanese troops tried to invade Australia it must be expected that the patriotic character of the Australians would mobilise the whole nation at the defence line. Twelve divisions would be needed. . . . To change the pre-arranged programme . . . and . . . conduct an immediate invasion of Australia, which is about 4,000 nautical miles away, with military forces far exceeding the total of all troops ever employed in the Southern Region since the outbreak of war, would be an extremely irresponsible operation. . . . The Army could never assent to it."

Hattori's statement was confirmed by General Tojo, then Japanese Prime Minister, in an official interview just before he died on 23rd December 1948 after he had been condemned at the International War Trials at Tokyo. Asked specifically whether Japanese policy ever contemplated the invasion of Australia and New Zealand, Tojo replied: "We never had enough troops to do so. We had already far out-stretched our lines of communication. We did not have the armed strength or the supply facilities to mount such a terrific extension of our already over-strained and too thinly spread forces. We expected to occupy all New Guinea, to maintain Rabaul as a holding base, and to raid northern Australia by air. But actual physical invasion—no, at no time." See also M. Fuchida and M. Okumiya, *Midway, the Battle that Doomed Japan* (1955).

tion of occupying Samoa, Fiji and New Caledonia and so severing the Allied South Pacific supply route. This much wider plan suited the strategic thinking of Admiral Yamamoto, commander of the Japanese *Combined Fleet,* who insisted that the sooner he engaged the main American Fleet in decisive battle the better. Yamamoto, since revealed as having regarded Japan's entry into the war as "suicidal", held that his only chance lay in such a battle and advocated the extension of the Japanese perimeter as far out into the Pacific as possible so that he would have the scope he needed to meet the Allied counter-measures he knew would come and which, once American war production really began to gain weight, would be beyond the strength of his own forces. Army planners, on the other hand, advocated a more compact operational area, within which internal arteries would convey strength to Japan from the resources of captured territories, notably the Netherlands East Indies, and the employment of the naval forces conservatively on the eastern flank. Admiral Nagumo has since contended realistically that an influence behind the expansive naval planning was the comparative ease with which so far the Japanese forces had achieved their victories, and the comparative smallness of the cost. At all events Yamamoto's venturesome planning prevailed. But, for the immediate future, the orders were brief and excessively simple:

> The South Sea Force and the Navy will occupy Port Moresby; the Navy will occupy Tulagi and Deboyne Island; they will establish bases and strengthen air operations against Australia. Another unit will occupy Nauru and Ocean Islands to secure phosphates.[8]

To accomplish these tasks Vice-Admiral Inouye, of the *Fourth Fleet,* in his flagship the light cruiser *Kashima* based on Rabaul, had command of several distinct forces in or approaching the Coral Sea area totalling in all 70 ships. These were:

A carrier Striking Force under Vice-Admiral Takagi, consisting of *5th Carrier Division—Zuikaku* (21 fighters, 21 dive bombers, 21 torpedo bombers) and *Shokaku* (21 fighters, 20 dive bombers, 21 torpedo bombers)—with 2 heavy cruisers, 6 destroyers and 1 oiler.

The Port Moresby invasion group of 11 transports (6 army carrying the *South Seas Force—144th Regiment* commanded by General Horii; and 5 navy, carrying *3rd Kure Special Naval Landing Force*) attended by 1 light cruiser, 6 destroyers, 1 minelayer, 5 minesweepers, 2 oilers and 1 repair ship. As a support group for this force there were 2 light cruisers, 1 seaplane tender (*Kamikawa Maru*) and 3 gunboats. The *Kamikawa Maru* was to anchor at Deboyne Island and establish a float-plane base there.

The Tulagi invasion force of one transport with a detachment of *2nd Kure Special Naval Landing Force* and a construction unit, accompanied by 2 destroyers, 2 minelayers, 2 anti-submarine vessels and 5 minesweepers.

A covering force for the invasion units of 4 heavy cruisers, and 1 light fleet carrier, the *Shoho,* which was equipped with 12 fighters and 6 torpedo bombers, and had 1 destroyer as escort. Seven submarines were also allotted to the area.

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[8] Production of food supplies weighed heavily in Japanese military consciousness and some priority was given in planning at this time to the intended seizure of the British and Australian phosphate resources of these islands.

The land-based air force which, within its range, would support Inouye's formidable air and sea armada consisted of approximately 60 Zero fighters, 48 bombers, 16 flying-boats and 10 seaplanes based mainly on Rabaul. The units included the headquarters of the *XI Air Fleet* which had moved in April from Formosa, the *25th Air Flotilla* (under Rear-Admiral Sadayoshi Yamada), which had been at Rabaul since soon after the base was captured, the *Yokohama Group* and two particularly battle-seasoned formations, the *Tainan* and *Genzan Air Groups,* which had reached Rabaul early in May. A detachment of fighters was at Lae and seaplanes were based at the Shortland Islands and at Tulagi.

When the Tulagi force sortied from Rabaul the support and covering groups and the *5th Carrier Division* were on their way from Truk. They were still out of range when Admiral Fletcher's air units attacked Tulagi on 4th May. By this time the Japanese had learned that an Allied force with at least one American carrier was in the Coral Sea. All available reconnaissance aircraft were ordered out to search, including the float-planes from Lae, the pilots of which reported taking off only a few minutes before a heavy Allied air attack on that base. It was these aircraft (operating from the Shortland base) which, on 7th May, discovered the Allied support group commanded by Admiral Crace. The attacks that followed were the only ones made by Japanese land-based aircraft on Allied seagoing forces in the Coral Sea battle period.

On the 5th, while the *25th Air Flotilla* mounted an attack on Port Moresby with all available aircraft, the invasion force, joined later by the Tulagi group, left Rabaul. Meanwhile the *5th Carrier Division* had been circumnavigating the Solomon Islands on a northabout course. The two carriers, neither of which had taken part in the Netherlands East Indies operations, were the only ones ready for action after Admiral Nagumo had returned from his sorties in the Indian Ocean. The force rounded the eastern extremity of San Cristobal Island, entering the Coral Sea on the 5th. It was hoped that by this sweep the main Allied force would be trapped between it and the Japanese covering force. Once Fletcher's force had been defeated the *5th Carrier Division* would be free for its next objective—a sortie towards the Australian coast to launch air attacks on the airfields at Townsville, Cooktown, Coen and Horn Island. But Fletcher upset these tactics by his insistence on rapid diversion once he was aware that his position was known to the enemy.

Though the American carrier force was sighted by a Japanese flying-boat crew on the morning of the 6th, the air attack force which found and sank the American tanker *Neosho* and destroyer *Sims* did not take off for that attack until the following morning. The delay, which was costly to the Japanese in that Fletcher had gained time to move his main force westward, is unexplained except by inference; apparently, like the Allied commands, the Japanese command was suffering from communication difficulties. Further, by devoting their air attack to *Neosho* and her escort,

the Japanese missed an opportunity to strike the American carriers while their own air units were absent attacking the carrier *Shoho.*

Like the Port Moresby invasion plan, the phosphate islands venture was also stillborn: this detached force encountered trouble early when an American submarine sank an escorting destroyer. In the meantime another American carrier force, commanded by Admiral Halsey, was moving to Fletcher's aid with all haste. It did not arrive in time, but, with knowledge of its approach, the Japanese command ruled against any further risk and abandoned the Nauru-Ocean Islands operation for the time being.

As the Coral Sea battle closed two comparatively minor but harassing elements of the Japanese forces continued to operate. One of these was the float-plane force with the tender *Kamikawa Maru* which had carried out her allotted task and opened a base at Deboyne Island. On 9th May a Catalina of No. 11 Squadron, piloted by Pilot Officer Miller, was fiercely attacked by enemy float-planes while on reconnaissance over the Coral Sea. One member of the crew was wounded but the navigator, Pilot Officer Sandell,[9] gave him first aid and then manned his gun. Though it was perforated by bullets, some of which had damaged the elevators and almost severed one rudder cable, Miller brought the aircraft safely back to Cairns. After alighting the crew counted 92 bullet holes on the fuselage and wings.

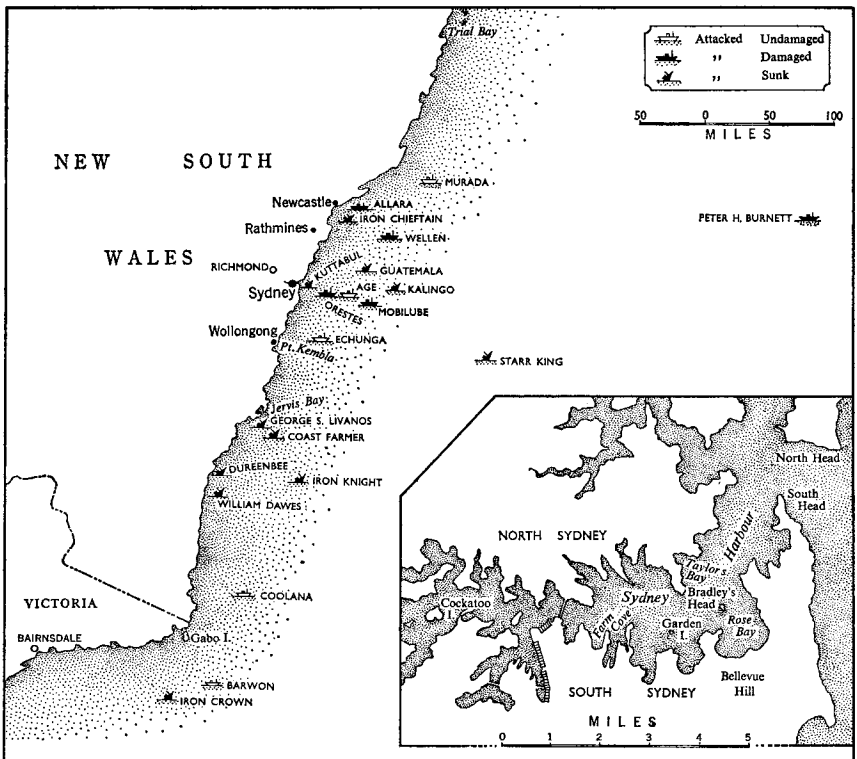
Next day four Mitchells, operating from Port Moresby, attacked the Deboyne base. Though the tender had left, several float-planes were moored there. They were bombed and strafed but the damage was not observed. Several days later reconnaissance showed that the tender had returned, evacuated the base, and retired, apparently to Tulagi where the main float-plane base had been established.

The other force still operating was the submarine flotilla that had been supporting Inouye's seagoing operations. The increase in the activities of these and other Japanese submarines in the area was now becoming sharply apparent to aircraft crews on reconnaissance off the east coast of Australia. Two R.A.A.F. Hudson crews operating to seaward from Townsville on 10th May, each attacked a submarine, one crew claiming hits forward of the vessel's conning tower with two 100-lb anti-submarine bombs and the other crew reporting two near misses in an attack on "a large black submarine flying what appeared to be a Japanese flag". A Mitchell crew also reported having attacked a submarine without observed results. That day three Hudson crews searched without success for an enemy seaborne force reported to be off the coast between Townsville and Cooktown.

But the operations of enemy float-planes and submarines were soon to be combined in dramatic circumstances that eventually caused many Aus-

[9] F-Lt A. K. Sandell, 401465. 11, 20 and 43 Sqns; Instructor 2 ANS 1943; astro navigation and Link trainer research Canada and United States and Instructor 1 OTU 1944-45. School master; of Kew, Vic; b. Melbourne, 16 Nov 1916.

tralian civilians to realise how very close the war now was to their own doors. At 6 a.m. on 29th May the controller at Fighter Sector Headquarters reported to Area Combined Headquarters, Sydney, that two



1942	Name	Nationality	Gross Tonnage	Attacked by	Result	1942	Name	Nationality	Gross Tonnage	Attacked by	Result
May 16	WELLEN	U.S.S.R.	5,135	Gunfire	Damaged	July 22	WILLIAM DAWES	U.S.A.	7,177	Torpedo	Sunk
31	KUTTABUL	Australian	Ferry	Torpedo	Sunk	23	ALLARA	Australian	3,279	Torpedo	Damaged
June 3	IRON CHIEFTAIN	Australian	4,812	Torpedo	Sunk	24	MURADA	Australian	3,345	Torpedo	Undamaged
3	AGE	Australian	4,734	Gunfire	Undamaged	26	COOLANA	Australian	2,197	Gunfire	Undamaged
4	BARWON	Australian	4,239	G'fire/Torp	Undamaged	Aug 3	DUREENBEE	Australian	233	Gunfire	Abandoned
4	IRON CROWN	Australian	3,353	Torpedo	Sunk	1943					
5	ECHUNGA	Australian	3,362	Chased	Undamaged	Jan 18	KALINGO	Australian	2,047	Torpedo	Sunk
9	ORESTES	British	7,748	Gunfire	Damaged	18	MOBILUBE	U.S.A.	9,860	Torpedo	Damaged
12	GUATEMALA	Panamanian	5,967	Torpedo	Sunk	22	PETER H. BURNETT	U.S.A.	7,176	Torpedo	Damaged
July 20	GEORGE S. LIVANOS	Greek	4,835	Torpedo	Sunk	Feb 8	IRON KNIGHT	Australian	4,812	Torpedo	Sunk
21	COAST FARMER	U.S.A.	3,290	Torpedo	Sunk	10	STARR KING	U.S.A.	7,176	Torpedo	Sunk

Japanese submarine operations off south-eastern Australia.

unidentified single-engined float-planes were over the city. They were reported to have flown north towards Rathmines and then returned, circling out to sea on the way back to Sydney. Aircraft from No. 41 United States Pursuit Squadron took off to intercept but were unsuccessful. On the next night another unidentified aircraft was reported and a radar

plot indicated that it had passed 20 miles east and 70 miles south of the city. A "yellow" air raid warning was issued in Sydney at 11.32 p.m.

On the night of the 31st at 8.15 p.m. a Maritime Services watchman saw by moonlight an object caught in the boom net defences that extended across the harbour channel. Six harbour defence craft were on duty—the anti-submarine vessel *Yandra,* channel patrol boat *Yarroma,* and four Naval Auxiliary Patrol launches. *Yarroma* was informed of the object in the net and found that it was a small submarine which, at 10.35 p.m., blew up. At 10.52 p.m. the watch in the American cruiser *Chicago,* which was lying off Farm Cove, saw another midget submarine only 200 yards from the ferry wharf at Garden Island. *Chicago,* and then the Australian corvette *Whyalla,* opened fire. At 11.30 p.m. two torpedoes were fired at *Chicago* from the direction of Bradley's Head. One sank the small depot ship *Kuttabul* as she lay alongside Garden Island, killing 21 of her ratings and wounding 10. The second torpedo ran aground on the island and did not explode. Meanwhile at 10.54 p.m. a submarine had been seen outside the boom. *Yandra* dropped depth-charges. At 5 a.m. on 1st June a submarine was seen in Taylor Bay and it was attacked with depth-charges intermittently for three hours and a half. It was sunk. At 1.5 a.m. a fishing vessel had reported a submarine five miles off Port Hacking.

Area Combined Headquarters had passed on information about the submarines to all air force stations in its area and orders were issued that all aircraft should be made ready and dispersed. At 2 a.m. two diverging searches were begun by two Hudsons and three Beauforts from R.A.A.F. Station, Richmond, but there was no result. On the morning of 2nd June three Hudsons and two Beauforts from Richmond searched for a submarine "parent" ship. Further patrols were made that day and the next.

The presence of a submarine about 30 miles east of Sydney was confirmed at 10.42 p.m. on the 3rd when the cargo vessel *Iron Chieftain* (4,812 tons) was torpedoed and sunk. Then came news that at 9.10 p.m. the freighter *Age* (4,734 tons) had been shelled (but not hit) when in about the same position. A Catalina was sent out from Rathmines and soon all available aircraft were searching for the submarine and for a lifeboat that was reported missing from the *Iron Chieftain,* but without success.

On 4th June the *Barwon* (4,239 tons) was hit by a torpedo when steaming off Gabo Island. She was not disabled. That day, when 44 miles south-west of Gabo Island, the crew of a Hudson from No. 7 Squadron, based on Bairnsdale, saw the freighter *Iron Crown* (3,353 tons) blow up. Soon afterwards a submarine surfaced. The Hudson, piloted by Flight Lieutenant Williams,[1] straddled the submarine with two anti-submarine

[1] Sqn Ldr C. C. Williams, 377. 8, 6 and 7 Sqns; comd 2 Sqn 1943. Regular air force offr; of Glen Innes, NSW; b. Glen Innes, 10 Oct 1919. Killed in action 9 Jul 1943.

bombs. Williams then manoeuvred to drop his only two remaining (general-purpose) bombs—but the submarine dived before this could be done.

In an intense effort to counter all this enemy activity five Hudsons from No. 6 Squadron searched on 5th June on a parallel track for 100 miles out from Trial Bay to Port Kembla. At 1.10 p.m. one of these aircraft, captained by Flight Lieutenant Hitchcock, saw what appeared to be the wake of a submarine at 32.12 degrees south 152.06 degrees east. Four 250-lb bombs were dropped from 700 feet. When the explosion subsided an oil patch which grew to about 100 yards by 30 appeared. Bostons of No. 22 Squadron were sent from Richmond. They arrived over the position at 2.2 p.m. but saw no submarine. That day the *Echunga* (3,362 tons) was chased by a submarine off Wollongong, but escaped. On 6th June at 4.38 p.m. the crew of another No. 22 Squadron Boston, piloted by Flying Officer Morgan,[2] saw a submarine submerging at 34.02 degrees south 151.15 degrees east. Morgan dropped two bombs and an oil patch appeared.

There were no sightings on the 7th but at 12.35 a.m. on the 8th a submarine fired several shells into the Sydney suburbs of Rose Bay and Bellevue Hill, and at 2.45 a.m. another submarine fired some shells into Newcastle. Little damage was done.

Air searches were intensified. On 9th June the British ship *Orestes* (7,748 tons) was shelled by a submarine when south-east of Sydney, but the damage was only slight. Next day the crew of a Boston of No. 22 Squadron, piloted by Flying Officer Miles,[3] sighted a submarine at 32.42 degrees south, 153.23 degrees east. They dropped bombs and a large patch of oil appeared. It was assumed (incorrectly) that this submarine and the one attacked by Morgan on the 6th had been destroyed. On the 12th the Panamanian ship *Guatemala* (5,967 tons) was sunk when in convoy east-north-east of Sydney. A series of sightings from 12th to 25th June suggested that a submarine was moving northward along the east coast. Thereafter no ships were sunk in the area for more than three weeks.

The Japanese had planned that, after the attack on Port Moresby, advanced elements of the Eastern Fleet would attack Allied warships in "important areas" in the South Pacific. But since the Coral Sea battle had delayed the Port Moresby invasion, the commander of the *Advanced Fleet* issued an order on 11th May that, of the six submarines attached to his force, three which had been directly engaged in the Coral Sea battle (*I-22, I-24* and *I-28*) and a fourth (*I-27*) which had been on reconnaissance in the south Pacific should return to Truk to prepare for

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[2] F-Lt V. W. Morgan, 550. 7 and 22 Sqns. Regular air force offr; of Claremont, WA; b. Wagin, WA, 1 Aug 1917. Killed in aircraft accident 10 Nov 1942.

[3] F-Lt J. C. Miles, 253616. Instructor 4 SFTS; 22 Sqn; OC Test Flight 1 AP Laverton 1944-45. Flying instructor; of Sydney; b. Launceston, Tas, 6 Feb 1903.

further action.[4] Each of these vessels carried a midget submarine. Meanwhile, of the other two, each of which carried a float-plane, one (*I-21*) was ordered to reconnoitre Suva and the other (*I-29*) Sydney. The crew of *I-29*'s float-plane confirmed the presence in Sydney Harbour of "battleships and cruisers". It was decided therefore that Sydney would be the target and *I-21* was ordered from Suva, its float-plane to make a further reconnaissance over Sydney Harbour before the attack on the night of 31st May. *I-22, I-24* and *I-27* left Truk about 20th May and set course for Sydney.

Early on the morning of the 30th one of the two float-planes took off from a position about 35 miles north-east of North Head at the entrance to Sydney Harbour. The experiences of the pilot of this aircraft from *I-21,* 2nd-Lieutenant Susumu Ito, have been described with some detail in a post-war interview.[5] His aircraft was a small two-seater scout seaplane with collapsible wings. It was unarmed and carried no markings. The submarine crew considered it highly improbable that he and his observer would return from their flight. The sea was choppy and the wind rising as they became airborne. The cloud ceiling was at 2,000 feet. Ito climbed to 1,500 feet and passed over North Head at that height, descending sharply to 600 feet to fly up the harbour. As they flew his observer sketched the position of the harbour boom and its entrance. The official Japanese naval map they used was very accurate in harbour detail but most inaccurate in the detail of the suburbs. Approaching Garden Island Ito observed what he took to be a large cruiser and four destroyers. When searchlights swung towards him he climbed into cloud. Descending again he flew over Farm Cove observing as he did so what he took to be an "A" class cruiser (presumably U.S.S. *Chicago*). Skimming at only 450 feet towards the harbour bridge he climbed again and then circled over Cockatoo Island where, he said, he could see the welding flashes as men worked in the dockyard. In the vicinity of the airport, which he could not find on his map, his aircraft apparently was mistaken as "friendly" and the flare path was lighted. After he had been over Sydney for about 10 minutes he flew out to sea again but could not find the mother submarine. Flying back over North Head he then turned seaward again and flashed his lights for two or three seconds. *I-21* responded with a 5-seconds flash and Ito brought his aircraft down on the water near her. A high sea was running and the aircraft overturned but both pilot and observer managed to get clear and swim to the submarine. The floats on the aircraft were punctured so that it sank and Ito then reported to the captain.

Next night the three midget submarines entered the harbour. They were not expected to return, but the mother submarines waited for two days though, on the 31st, there was a very heavy storm. When the crews

[4] *I-28* was sunk on 17th May by the United States submarine *Tautog* when about 50 miles south of Truk.

[5] Interview by Richard Hughes in Tokyo and published in the Melbourne *Herald,* 2nd April 1949.

of the mother submarines heard an Australian radio announcement that the Japanese midget submarines had been destroyed, the pack dispersed.

The American naval historian, S. E. Morison, has noted that "if Imperial Headquarters delayed coming to a decision owing to interservice squabbling, Admiral Yamamoto was apt to bring up a plan of his own".[6] Before the Coral Sea battle he had done this. In April, from his flagship, the battleship *Yamato,* then lying in Hiroshima Bay, he sent one of his staff officers, Captain Watanabe, to Imperial Headquarters to submit a plan for the capture of Midway Island and the occupation of strategic bases in the outer Aleutian Islands.

How Yamamoto overcame intense opposition to his plans has been described by Commander Masatake Okumiya, a staff officer of the Imperial Japanese Navy who was present at Imperial Headquarters as an observer when the plan was discussed.[7] According to Okumiya, Yamamoto had warned the Japanese High Command at the outset that he could not guarantee that the navy would be able to maintain effective operations for more than a year. Of the headquarters conference, he said:

> With tears in his eyes Commander Mitsushiro, No. 1 Air Staff officer at Imperial Headquarters, appealed to Yamamoto's emissary to persuade the Commander-in-Chief to strike south towards Australia rather than east towards Hawaii. He argued with great passion and logic, that the Midway operation would involve an engagement with American land-based and fleet-arm planes; that the Japanese Air Force could not destroy or immobilise the U.S. Air Force on Hawaii, no matter how weakened the U.S. Pacific Fleet; that it was doubtful whether the Japanese landing force on Midway could be adequately supplied; that it was certain that the Japanese Air Force reconnaissance from Midway could not undertake the task of effectively watching, day and night, perhaps for months, the counter movement of U.S. task forces or U.S. planes.
>
> He claimed, on the other hand, that diversion of the powerful Yamamoto units to a base at Samoa would be comparatively simple as any fighting would be from island to island and cooperation of land-based aircraft could therefore be organised. He pointed out that by thus straddling communications between Australia and the United States and bringing the Australian coastal cities under fire, the Imperial Navy would still be able to force the remnants of the U.S. Pacific Fleet to battle and so still meet the cardinal condition of Yamamoto's policy.

After "wrangling for three days" Watanabe returned to Yamamoto bearing Imperial Headquarters' "bitterly reluctant" approval for his Midway and Aleutians plan. Formal orders to seize Midway and the Aleutians reached Yamamoto on 5th May.

After the Coral Sea battle, Yamamoto and the commander of the *XVII Army,* Lieut-General Harukichi Hyakutake, on 18th May, were ordered to carry out the scheduled task of capturing New Caledonia, Fiji and Samoa, and were again told to take Port Moresby. Hyakutake's main

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[6] S. E. Morison, *Breaking the Bismarcks Barrier, 22 July 1942-1 May 1944* (1950), p. 18, Vol VI in the series *History of United States Naval Operations in World War II.*

[7] Cdr Okumiya gave his account when interviewed in Tokyo in May 1950 by Australian newspaper correspondent Richard Hughes, who made the full text of his report available for the purposes of this history. See also Fuchida and Okumiya, *Midway, the Battle that Doomed Japan.*

forces were to be drawn from the *5th, 18th* and *56th Divisions* of the *Southern Army* then dispersed between Davao in the Philippines, Java, and Rabaul. For the seizure of the three island groups a most impressive naval force was to be provided: *I Air Fleet* (Vice-Admiral Nagumo)—7 aircraft carriers, 11 destroyers and auxiliary supply ships; *Second Fleet* (Vice-Admiral Kondo)—13 heavy cruisers, 2 light cruisers and 24 destroyers. Cover was to be provided by the *Eighth Fleet* (Vice-Admiral Mikawa) which included four battleships. For the attack on Fiji Major-General Kawaguchi had a force of 6,126 all ranks; for New Caledonia Major-General Horii had his *South Seas Force* of 5,549 all ranks, and the Samoa assault was to be undertaken by a force of 1,215 all ranks, commanded by Colonel Kiyomi Yazawa.

Meanwhile Yamamoto was to begin his new offensive against Midway with a serious disadvantage of which he was quite unaware. By 15th May Admiral Nimitz had learned of Yamamoto's intentions through the successful decoding of naval signals and from other Intelligence sources. Only three American carriers—*Yorktown,* repaired after her damage in the Coral Sea, *Enterprise,* and *Hornet*—would be ready for action in the Pacific in time to meet this attack, whereas the Japanese might employ four, or perhaps six. On 19th May Admiral King asked the British Admiralty to help either by moving a carrier from the Indian Ocean to the South-West Pacific or by making air attacks on Rangoon and the Andaman Islands. Admiral Somerville, commanding the British Eastern Fleet, was able at that stage only to make a diversionary movement towards Ceylon.

The Japanese Fleet set out from its bases between 24th and 27th May. It included four large carriers—*Akagi, Kaga, Hiryu* and *Soryu*—supported by seven battleships, a light carrier, seaplane carriers, cruisers and many smaller vessels. Twelve transports carried about 5,000 troops. Forewarned, the American carriers were concentrated north-east of Midway on 2nd June. Next day the enemy's transports were sighted and attacked with little effect by land-based aircraft.[8] Early on the 4th the Japanese carriers were sighted about 200 miles south-west of the American carriers' position. Admiral Nagumo of the Japanese carrier force did not know that the Americans were in the vicinity and, an hour earlier, had dispatched more than 100 of his 272 aircraft against Midway. Land-based bombers and torpedo bombers from Midway attacked the carriers, but did them no damage. At 7.28 a.m. a Japanese aircraft reported American ships—but not carriers—and at 7.45 a.m. Nagumo ordered his remaining striking forces to attack. Half an hour earlier he had ordered this force to change its torpedoes for bombs and make a second attack on Midway. Consequently there was now confusion on the Japanese carriers: the first striking force was about to return, the second was rearming. In the

[8] The tiny islands of the Midway group were crowded with aircraft: Marine Air Group No. 22 with 28 fighters and 34 dive bombers; 30 Navy Catalinas and Seventh Air Force reinforcements from Hawaii consisting of 17 Flying Fortresses, 6 Avengers (torpedo bombers) and 4 Marauders.

subsequent battle all four Japanese carriers were sunk. The Americans lost *Yorktown.*

The victory at Midway transformed the situation in the Pacific. The greater part of the Japanese carrier force had been destroyed and henceforth the American Navy was likely to remain the dominant one. "In terms of naval tactics the victory of Midway was revolutionary," wrote a British naval historian. "Many actions in which British aircraft carriers had fought earlier in the war, such as Taranto, Matapan and the pursuit of the *Bismarck,* had pointed the way to where the striking power now chiefly lay, and the Coral Sea had emphasised the lessons. But it was in this great battle that the decisiveness of carrier-borne air weapons was finally and decisively proved. Virtually all the damage done on both sides was accomplished by them. The shore-based aircraft, though numerous and most gallantly flown, accomplished practically nothing and their losses were heavy."[9]

It is easy to conclude that the dramatic success of the carriers' aircraft —notably the dive bombers—had thus completely discounted the use of the Flying Fortress heavy bomber in this type of action. Yet the debate between the American navy and air force on this issue was protracted, and since combat between air and surface craft remained of critical importance throughout the war, the gist of the argument is pertinent here. With their successes completely proved, the advocates for the carrier-borne dive bombers could well afford to let their case rest. On the other hand advocates of the Army Air Force emphasised fairly enough the disabilities under which the Fortress crews were forced to operate: cramped conditions on Midway where they had to do almost all their own servicing, months of exhausting long-range reconnaissance flying (up to 1,800 miles in one sortie), and a serious lack of attack training because of this long-range search obligation. Never more than 14 Fortresses were available at one time to attack a group of targets—an average of fewer than four aircraft to each target—much below the standard required by Army Air Force doctrine. They cited a report sent to the Chief of Staff, Washington, just before the battle, by the commanding general at Hawaii, Major-General Robert C. Richardson, in which he asserted that from 90 to 100 heavy bombers would be needed to assure the probability of 7 per cent of hits on an enemy force of five carriers. Even from the relatively low altitude of 12,000 to 14,000 feet at least 18 to 20 aircraft would be needed, he said, to ensure 7 per cent of hits on a single manoeuvring surface craft.[1] Finally, to the credit of the Fortress crews, there is the evidence from subsequent interrogation of Japanese who took part in the battle that the heavy bombers had caused the enemy ships to break formation in their endeavours to avoid falling bombs and so had lessened their mutual defence and made easier the task of the dive bombers.

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[9] S. W. Roskill, *The War at Sea 1939-1945,* Vol II, p. 41.

[1] Craven and Cate, Vol I, p. 460*n*.

General Richardson's assessment of the large number of bombers required and his statement of "relatively low" altitudes as being "12,000 to 14,000 feet" might well be accepted as evidence for the prosecution rather than the defence. Some of the Fortresses attacked from 20,000 feet, an altitude acceptable for some time after Midway as appropriate for attacks by heavy bombers on ships under way. Here, perhaps, was a keen point for criticism, for since the beginning of the war almost all the successful air attacks on naval vessels had been from low altitude. Only time and experience would tell, though some would contend, not unreasonably, that already there had been sufficient of both to provide the answer.

As for Admiral Yamamoto's ambitions; the Midway defeat had been disastrous and, in terms of the replacement of ships (particularly carriers), aircraft and pilots, it was to prove extremely critical.[2] His hope had been for an early and decisive battle with the American Pacific Fleet; Midway had certainly been decisive. Even a final Japanese attempt to retrieve something from their ill-fated operation failed. An effort to bombard the base with gunfire from their cruisers on the night of the 4th June resulted in a collision between two of the ships, one of which, *Mikuma,* was sunk and the other, *Mogami,* heavily damaged on the 6th by dive bombers from *Enterprise.*

The setback in the Coral Sea in May had caused relatively small changes in the Japanese plans but Midway led to radical alterations. The advance against Samoa, Fiji and New Caledonia was postponed for two months. On 14th June Hyakutake was told to prepare for an overland advance on Port Moresby, provided that reconnaissance showed the operation to be feasible. On 11th July Hyakutake was told to carry out the reconnaissance as soon as possible, and on the 18th he issued orders for an advance over the Owen Stanleys to Port Moresby, while the navy, helped by *Kawaguchi Force,* was to seize Milne Bay as an advanced base from which to cooperate in the attack on Port Moresby.

[2] It was estimated that the Japanese carrier force lost 250 aircraft in the battle and 30 per cent of their pilots—pilots who were regarded as the most highly skilled and best trained in the Japanese Navy.

CHAPTER 27

NO "SECOND FRONT"

IN surveying the effect of the Coral Sea and Midway battles on his own particular task, and in taking stock of the continuing Japanese threat, General MacArthur contemplated a variation in the strategic planning agreed to by the Joint Chiefs of Staff in Washington. As their directive initially stated, his task was to "hold the key military regions of Australia as bases for future action against Japan and strive to check Japanese aggression in the South-West Pacific Area". On 6th May depressing news came from the Philippines. With all prospect of immediate aid gone and the capacity of his forlorn force completely exhausted, General Wainwright had surrendered. Those close to the Supreme Commander were aware that this news touched him deeply. Restive under the restraint that the Joint Chiefs of Staff had placed on his command, he proposed to Washington on 8th May that a "second front" should be developed in the Pacific. He believed that this would give Australia and India cover behind which they could build for an offensive and, his argument continued, it would aid the Russian war effort by forcing the Japanese to withdraw substantial forces that were keeping Soviet troops in considerable strength stationed in Siberia. But the Joint Chiefs of Staff, planning on a scale much vaster than that required for the Pacific alone, and maintaining their "Germany first" concept, ruled that there would be no second front against the Japanese.

With his strategic needs clearly in mind, MacArthur sought through General Marshall in Washington the addition of two aircraft carriers to the naval forces operating under Vice-Admiral Leary's command. The request was refused; there were now only three American carriers in the Pacific, and the British Admiralty, which had been asked to make up the deficiency from its force in the Indian Ocean, declined to do so because it was still acutely conscious of its vulnerability in that area.[1]

Early in June Japanese forces moved across from Tulagi to Guadalcanal where, on the Lunga Plain, they were preparing an aerodrome. This consolidation of the enemy forces called for counter action. But MacArthur's eyes were on New Britain and New Ireland, through which he proposed an assault with Rabaul as the objective. He argued that if forces were brought in from the Atlantic and Indian Oceans for swift and strong, though temporary, operations against the Japanese, his objective could be achieved. General Marshall favoured this plan and contemplated pressing the U.S. Navy to move two or three carriers from the Atlantic and the Royal Navy two or three from the Indian Ocean, all of them for operations against New Britain and New Ireland. He set his air planning staff

[1] Four months later MacArthur again sought naval reinforcements from Admiral Nimitz. He asked for the transfer to his own naval command of the somewhat aged battleships then operating in the eastern Pacific. He was told that these were unsuitable for operations in the SWPA.

to work examining the prospect of progressively achieving air superiority over the intervening land bases. This would mean providing for a rapid increase in air facilities in north-eastern Australia and in the Port Moresby area. With such air supremacy the recapture of Lae, Salamaua and Gasmata by airborne task forces might be possible. Allied fighters and bombers would be moved forward and an amphibious assault could then be made on Rabaul with support from both land-based and carrier-borne aircraft. Later in the month this plan was developed in Washington by the addition of a proposal that British forces should make an assault on Timor, supported by aircraft based in north-western Australia. The operations would be coordinated with one by an American task force moving against Tulagi while supported by at least two carriers and by land-based aircraft operating from north-eastern Australia, the New Hebrides and New Caledonia.

So far as the British forces were concerned, apart from the reluctance already expressed, the gravity of the situation in the Middle East precluded any such commitment in the South or South-West Pacific at this stage. The American Navy planners though agreeing that "unity of command was essential . . . feared that, if the high command were given to General MacArthur, he might dangerously expose the aircraft carriers . . . between the Solomons and New Guinea within range of land-based aircraft".[2]

Instead they proposed as a first step, the capture of Tulagi by South Pacific forces supported by MacArthur's forces. Here the rub between the two commands became apparent for, under his directive, Tulagi clearly was within MacArthur's command. That the navy regarded an operation against Tulagi as within their own area of command was indicated on 29th June when Admiral King proposed to the Joint Chiefs of Staff that Vice-Admiral Robert L. Ghormley, who on the 19th had been appointed commander in the South Pacific, should undertake the capture of Santa Cruz and Tulagi. MacArthur, it was to be understood, would take control in the succeeding stage—an assault on the enemy's bases in New Guinea and New Britain. But MacArthur feared that under this plan his army forces might be used for little more than garrison purposes. He opposed, too, suggested action against Timor, which could not be supported as could an operation in the New Britain area. He doubted whether Timor could be held in the face of opposition from the near-by Japanese bases which also made extremely hazardous the continuous control of the sea lane between Timor and Australia, control which unquestionably was essential to success. His own plan presupposed that the Allied forces would establish air supremacy. This, he felt, should overcome the navy's fears about their vulnerability in the waters between New Guinea and the Solomons. Apart from his strategic objections to the navy's plan MacArthur was keenly conscious of the challenge to his command.

Even so the Joint Chiefs of Staff saw in King's concept the basis for a practical compromise, and on 2nd July they issued a directive which

[2] John Miller Jr, *Guadalcanal: The First Offensive* (1949), p. 14, a volume in the official series *United States Army In World War II.*

set out a three-stage campaign and decided the command issue by moving westward to the 159th meridian the boundary between the South-West Pacific and South Pacific areas. This alteration, to date from 1st August, would bisect the Solomons and place the lower half, including Tulagi, under Ghormley's command. The first stage was to be the capture of Tulagi and Santa Cruz by Ghormley's forces supported by such air and naval forces as the South-West Pacific Command could afford. MacArthur would be responsible for the second and third stages, the second being the recapture of the upper portion of the Solomon Islands and of Lae and Salamaua. The third would be the recapture of Rabaul and adjacent bases in New Britain and New Ireland. The directive left the timing and the "passage of command" with the Joint Chiefs of Staff. MacArthur and Ghormley conferred on the projected campaign and both recommended that the offensive should be deferred because each command lacked the needed resources.

But, in the opinion of the Joint Chiefs of Staff, postponement was a risk they dared not take. The urgent demand was for an immediate invasion to stop the enemy's advance and provide a base from which to assail the Japanese stronghold at Rabaul. In this way the advantages gained from the Coral Sea and Midway battles could be turned to full account. MacArthur would be expected to do what he could to prepare for phase 2 of this offensive while assisting with phase 1. Here was no grand second-front strategy, but the prospect of a hard struggle, striking blows with what forces he had where and as he could, and for the immediate blows he was rather desperately in need of an air striking force with greater strength and greater capacity than what he now possessed.

To say that the American air component in MacArthur's forces in mid-1942 was suffering from "growing pains" is an understatement. The unhappy experience of No. 8 Squadron with their Dauntless dive bombers provided a case in point. On the last day of March they had flown to Port Moresby—the first American squadron to be based there—in unpropitious circumstances. Staging through Cooktown, they mistimed their arrival, an error said to have been due to overlooking the difference caused by daylight saving, and flew in over the New Guinea base in darkness and bad weather. Two aircraft crashed in landing and had to be written off. Quartered on Kila aerodrome they immediately prepared for action. Early next day, with six Kittyhawks as escort, they took off to attack Lae, but the target was obscured by clouds so they dropped their bombs on Salamaua without significant result. There was no enemy fighter interception on this the first close cooperation between a R.A.A.F. fighter unit and American bombers in action in the Pacific. Rather depressingly begun, the squadron's first operational tour in New Guinea provided few reasons for optimism. Their comparatively slow aircraft were short in range and vulnerable to fighter attack unless well protected by their own fighter escort, and the crews (pilot and observer-gunner) soon lacked confidence in them. The Dauntless was designed for carrier-borne opera-

tions and seemed unequal to the wear and tear of the New Guinea airfields. By 4th April there were only 12 in commission of 26 available. Yet the enemy was not responsible. In this tour in New Guinea the squadron lost only 2 aircraft in combat, while claiming 6 enemy aircraft destroyed on the ground and 2 shot down. When, at the end of May, the unit had completed two months of front-line operations it was withdrawn to the mainland; it had accomplished only four combat missions—a total of 29 sorties.[3]

An account of the lot of Flying Fortress crews of No. 19 Group in this period is also depressing. So great had been the strain imposed on these aircraft that, early in April, only six were in commission. During May and June the average number of these bombers that were combat-worthy at one time was only 17. Based on Townsville and most often staging through Port Moresby, the crews were away from their home base for between 36 and 48 hours at a time and usually were airborne for about 18 hours in that period—conditions that put a heavy strain on already weary men.

On the other hand the Marauder and Mitchell squadrons provided a more encouraging picture. The Marauder, though regarded by many as a difficult aircraft to fly—it "took getting used to" because its wing-span was considerably shorter than that of any other comparable aircraft[4]—inspired confidence in its trained combat crews. The same was true of the Mitchell. These aircraft had good firepower, speed, and range, all qualities that made them especially acceptable against an enemy so well equipped with fighters as were the Japanese. At this stage, however, only 14 Mitchells had been gained from the order that was transferred from the Dutch when the Netherlands East Indies fell to the Japanese. Despite this, between 24th April and 4th July they were flown on 70 combat sorties. In the same period the Marauders flew 84 and the Fortresses 45 sorties. The Marauders were used to supplement the Fortress strikes on Rabaul. Staging through Port Moresby, the distance to the target was 1,200 miles and a 250-gallon fuel tank had to be fitted into the bomb bays to give them the needed range.[5] Between 6th April and 24th May Marauders completed 16 missions for a total of 80 sorties to Rabaul alone. For these attacks, which, after May, were discontinued for some months, the Marauder crews claimed bomb hits on 3 transports, 2 merchant ships and an aircraft carrier and the destruction of at least 16 aircraft on the ground and 10 in air combat.

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[3] The American official historians, whose narrative has been used in this assessment, have written: "the A-24 was written off by AAF personnel as unsuited to the type of operations required in New Guinea, perhaps mistakenly in view of its subsequent record in Navy hands."—Craven and Cate, *Army Air Forces in World War II*, p. 478.

[4] For this reason operational training accidents were reported to be more frequent with the Martin Marauder than with other aircraft, and aircrew came to refer to them cynically as "Martin's prostitutes" because they lacked "visible means of support"!

[5] The importance of Rabaul as a target is indicated by the number of strikes against it at a time when the AAF's striking capacity was so very limited. The first strike was made by 6 Fortresses on 23rd February; there were 5 Fortress strikes in March, 4 in April and 9 in May. Thenceforward the base was attacked with a regularity determined by Intelligence information indicating the arrival of Japanese reinforcements or the concentration of forces for some fresh assault.

Photographic reconnaissance showed that Allied bombing raids were doing little to hinder the enemy's airfield construction program. Their best effect, clearly, was to limit the number of aircraft the Japanese were prepared to risk at Lae and Salamaua—comparatively few bombers and rarely more than 40 fighters—though the fighter strength was still sufficient to take toll of attacking Allied aircraft. As an example, when 8 unescorted Mitchells attacked Lae on 24th May 5 were shot down and a sixth crash-landed in a damaged condition when it returned to Port Moresby.

Observers close to the scene found cause for anxiety in the depressed mood in which some of the American combat units were operating at this time, notably in or through the New Guinea area.[6] In the judgment of the American official historians, there was an "unsatisfactory state of morale" in the U.S.A.A.F.

> Virtually all operations were flown from areas that were remote from the more thickly settled sections of Australia; living conditions were primitive, the food was chiefly an unfamiliar Australian ration, the incidence of dengue fever and malaria was high, and facilities for hospitalisation and recreation were more than inadequate. In these circumstances, the strain of unusually difficult operations took a higher toll. Personnel who had fought through the Philippine and Java campaigns suffered effects of fatigue that at times approached a defeatist attitude; even those who had flown their first combat mission in April had to fight a feeling of disillusionment. Long overwater flights, the dropping of a few bombs with unobserved results, the loss of friends to combat and accident, the lack of opportunity for leave and rotation, the slowness of promotion, and a rather confusing system of operational control, all added up to a trying experience that seemed to have little if anything to do with the outcome of the war. Personal relations with the Australians were generally excellent, for the two peoples had much in common, but the American flyer tended to resent the extent of RAAF control and to find in its administrative forms, as with any unfamiliar Government form, a ready source of grievance. . . . Responsible officers were alert to these and other needs, and some of them had occasion for satisfaction with the progress made. Air Services still suffered because of an insufficient number of trained personnel and the necessity of resorting to cannibalizing aircraft in order to get spare parts, but through the agencies of the Australian Government an increasingly effective liaison had been established between the Allied command and Australian industry. Some parts and very helpful maintenance facilities, were now available from Australian sources. . . .[7]

For their part the R.A.A.F. operational units, though they too, of course, had their grievances—chiefly expressed in the same and constant plea for "more and better" aircraft and other equipment—were in a stronger psychological state. They were fighting on and from their native territory with a strong leavening of combat-seasoned men among them; they were close to home and they still enjoyed (though it was soon to end) the psychological advantage of being more experienced in this combat zone than their American comrades-in-arms. On many matters of local importance, both in administration and operations, they were the authorities and to them the Americans had to defer. Whatever it lacked, the R.A.A.F. was virile, well-trained and proud. Confident of their own

[6] In Darwin, where the Australian morale had been poor, it was American fighter units (No. 49 Pursuit Group under Lt-Col Paul B. Wurtsmith) who had done most to restore it.

[7] Craven and Cate, Vol I, p. 482.

professional capacity, some members of the force were disdainful of the "Yanks". They were critical of the Americans' failure on occasions to find the bombing target; they suspected that Flying Fortress crews bombed from high altitude because they were afraid to come lower; they were disparaging of the "softness in American morale". As the American historian quoted here has indicated, there was some justification for such criticism, but it was never expressed resentfully, or without consciousness of lapses in R.A.A.F. morale, by any who knew the reasons and the counter-measures that were being taken. Members of the R.A.A.F. readily praised American combat crews and ground staff who provided examples of courage and devotion to the task of fighting the Japanese, and they not only respected but virtually idolised such officers as Wurtsmith and Wagner, the American fighter group leaders, and Carmichael, the commander of No. 19 Bombardment Group.

Lack of reinforcements, and particularly aircraft replacements, a primary cause of the disturbed state of the U.S.A.A.F. at this time, was the subject of keenly expressed messages to Washington by both MacArthur and Brett. So far as the two commanders were concerned no direct public statement from them on this crucial subject had yet been made. Brett, however, at a conference in Townsville with war correspondents accredited to the command, spoke very freely of the lag in aircraft deliveries to the South-West Pacific and its consequences. Experienced correspondents pointedly questioned him as to whether some of his very frank statements, in which he was sharply critical of Washington policy, were "for the record". On each occasion the general answered with an emphatic "Yes". As was obligatory, the despatches written later by the correspondents were submitted to the publicity censors, who declined to accept responsibility for their publication and referred them to General Brett himself. The general ordered them to be destroyed, indicating at the same time some very limited terms in which his interview might be reported. One of the correspondents sent a carbon copy of his original despatch by safe hand to his office in Sydney with an explanation of the circumstances of its censorship. The office referred it to the censors at G.H.Q. who, after some deletions from the text, including Brett's name and any hint as to its source, passed it for publication. Headed (across two columns) "Not Enough Planes in North; Qualities of the Zero Fighter; Allied Pilots Handicapped" the article appeared in a Sydney newspaper.[8] In part it stated:

> Until the flow of American aircraft into Australia becomes far greater, it is futile to think in terms of launching, much less sustaining, a large-scale aerial offensive against the Japanese north of Australia. Moreover, some types of American fighter aircraft are unsuitable for carrying out long-range bomber-escort duty. There is no question about the superiority of the Zero in operations of that character. . . . We cannot at this stage carry out sustained offensive operations against the Japanese, although the essential value of aerial operations lies in their offensive character. We cannot pass from the defensive to the offensive until aircraft reinforcements arrive in much greater quantities than is the case at present. It must

[8] By Ray Maley, *Sydney Morning Herald*, 1 June 1942.

be borne in mind that the Japanese are able to employ fighter planes with a 1,400-mile range. The range of our fighters is approximately half that distance. The fact is that in Australia at present we do not possess a fighter capable of meeting the Japanese on equal terms as far as range is concerned. When we send fighters over as escorts on bombing missions we cannot do it without facing excessive losses. . . .

There need be no doubt about the final outcome of the air war in New Guinea. Meanwhile it must be understood that operations will be defensive in character as long as the long-range fighter and reinforcement position stays as it does at present.

Publication of this truthfully informative article represented a liberality in censorship on the part of General Headquarters to which the war correspondents were not accustomed. It had the effect of making public the burden of MacArthur's plaint and the censorship relaxation could be interpreted as showing some eagerness on the part of G.H.Q. to obtain indirect publicity for that plaint.

Another very real aspect of Allied Air Headquarters' concern about their aircraft strength at this time was the extremely high rate of loss from all causes. From April to mid-July American units lost a total of 171 aircraft—116 fighters and 55 bombers. Replacements received in May and June amounted only to 62 bombers; there were no fighter replacements.[9] Of the losses, enemy action accounted for 61 fighters and 22 bombers in combat and one fighter and 10 bombers destroyed on the ground. Added to these was "the depressing total" of 54 fighters and 23 bombers lost in accidents. In the same period claims were made for more than 80 Japanese aircraft shot down with others destroyed on the ground and an unrecorded number of damaged aircraft which could not have made their way back to their bases.[1]

On paper the Allied air force about which there was so much anxiety was reasonably strong. As listed on 31st June American air units were:

Bombers—5 groups (2 heavy, 2 medium, 1 light)
Fighters—3 groups
Transport—2 squadrons
Ancillary—1 photo-reconnaissance squadron

Had these units been fact and not just figures, it is probable that MacArthur would have been able at least to match the Japanese air strength to which his air forces were opposed. As it was, one of the heavy bomber groups—No. 43—would not be ready for combat for several months, thus placing the burden on the weary veterans of No. 19 Group. Similarly, one of the medium bomber groups—No. 38—would not have its aircraft in commission until September.[2] No. 22 (medium) Bombardment Group had been in operation since April; No. 3 (light) Bombardment Group, with which the remnants of No. 27 Group had been merged after the fall of Java, had three different types of aircraft—22 Dauntless dive bombers, 38 Bostons and 17 Mitchells. The fighters alone were up

[9] This total did not equal the estimated allowable wastage of 20 per cent.

[1] Craven and Cate, Vol I, p. 481.

[2] Even then two of this group's squadrons were assigned to the South Pacific Area.

to strength; on 1st May they had been reported to be 100 per cent complete with a 50 per cent reserve. By July two squadrons of No. 35 Fighter Group's P-400's (Airacobras)—an early export model of the P-39 with somewhat inferior characteristics including a 20-mm cannon instead of the 37-mm gun—had moved to Port Moresby; the Kittyhawks of No. 49 Group were still defending the Darwin area.[3]

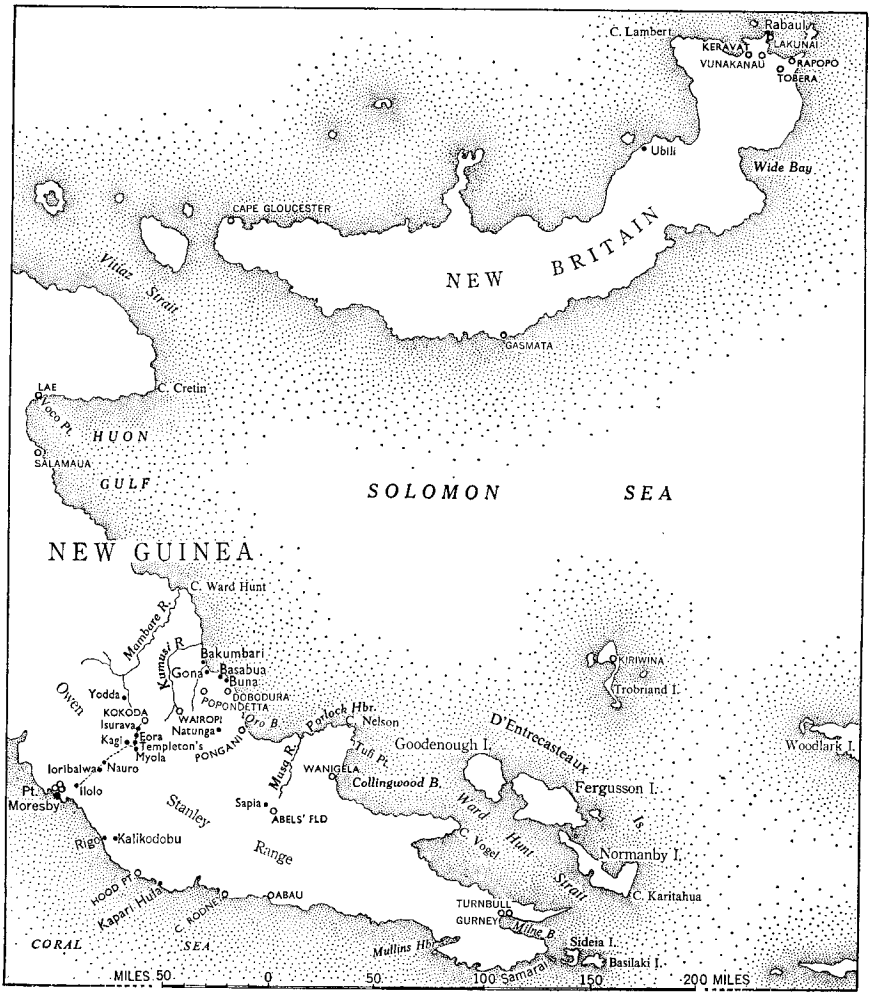
However, it was clear that the Japanese no longer dominated the air with the odds in both aircraft and in tactics heavily in their favour. And in spite of all their trials and problems and losses MacArthur's headquarters lived from day to day with understandable faith in American industry which must, in time, weight the scales heavily in their favour. The big question was—how long?

At the beginning of April the Allied air units in New Guinea were in almost daily contact with the enemy and the brunt of this day-by-day combat was being borne by the R.A.A.F's No. 75 (Kittyhawk) Squadron. Operating with 146 officers and men (56 members of the unit were still at Townsville awaiting transport) the unit had now recorded 343 hours of operational flying, 83 of them spent in combat sorties. Though numerically the scale of the battle was small it was always intense. Scarcely a day passed without battles over either Lae or Port Moresby, each raid being matched by a counter-raid. When not flying as escort for the Dauntless crews, or intercepting the enemy over their own base, the squadron was doing its best to help mount something of an offensive by engaging in low-level strafing attacks on grounded aircraft, anti-aircraft posts and stores dumps at Lae and Salamaua. Squadron Leader Jackson led 6 Kittyhawks against these targets on 4th April. Their gunfire set 4 enemy bombers and one fighter blazing and damaged 10 other aircraft, all of them on the ground at Lae. In combat on the 6th the squadron commander, after damaging two enemy bombers with his gunfire, was caught by a burst of Japanese fire which damaged his aircraft and forced him to land on a coral reef. Though his aircraft was lost he got ashore unharmed, using a life-jacket dropped to him by his brother. Operating with the Kittyhawks were two American pilots flying Airacobras (P-39's), the first of a number of American pilots sent to New Guinea to gain combat experience in the area. Each of the Americans scored hits on an enemy bomber.

On 10th April Squadron Leader Jackson failed to return from a reconnaissance flight over Lae, Salamaua and Nadzab. For days a depression hung over the squadron, but on the 18th word came from the New Guinea Volunteer Rifles that he was safe at Bulolo and was moving to Wau. A Dauntless from the American squadron was flown to Wau with Flying Officer Piper giving cover in a Kittyhawk, and Jackson was brought out

[3] In manpower MacArthur's forces (on 10th July) included 87,539 American troops, 44,000 of whom were land forces; 19,700 were members of air units, and the remainder were depot troops.—From W. F. Craven and J. L. Cate (Editors), *The Pacific: Guadalcanal to Saipan August 1942 to July 1944* (1950), pp. 7-8, Vol IV in the official series *The Army Air Forces in World War II.*

in the Dauntless. As the two aircraft were about to land at the Seven Mile aerodrome three Zeros that had evaded the warning system appeared overhead. One of the Japanese pilots dived on the Dauntless and opened fire. A bullet took the tip off Jackson's right index finger. The American



pilot, Lieutenant V. A. Schwab, took evasive action and landed the Dauntless on an adjacent strip without further harm while Piper made a vain effort to intercept the Zeros.

Jackson later explained that while he was reconnoitring Lae on the 10th he had been attacked by three Zeros. Jettisoning the Kittyhawk's bellytank, he tried to evade gunfire but, unable to gain sufficient speed

to outstrip them, he accepted the alternative and turned to fight. After firing a brief burst at one of the Zeros his guns jammed and another Zero pilot caught him with a heavy burst of fire. Still under attack and with his aircraft virtually riddled by enemy bullets, Jackson "ditched" the Kittyhawk in the sea. Struggling free from the cockpit he feigned death by lying in the water supported by his life-jacket while the Zero pilots circled menacingly over him. They made no further attack, however, and, when they eventually disappeared, Jackson swam towards the beach. Two natives who had seen him crash waded out and brought him ashore and then guided him to Busama, a near-by village. While the other natives in the village were apparently debating what they would do with him the two who had helped Jackson ashore signalled to him to follow them and set out swiftly through the jungle. Jackson did as they bid but since he had kicked off his flying-boots when he freed himself from the wrecked Kittyhawk, he was travelling barefooted. The journey was made under continual threat from Japanese patrols, and at one point one of them came within earshot. But the stealth of the natives gave him protection and his own hardihood enabled him to keep moving. On the eighth day the little party reached Bulolo where a New Guinea Volunteer Rifles patrol was camped. Aided by the patrol, Jackson was carried on a stretcher into Wau whence he was flown out on the 23rd.

On the day that Jackson was reported missing 9 Kittyhawks had intercepted 7 enemy bombers and one Zero in the Port Moresby area. Flying Officer Atherton[4] shot down one of the bombers and 5 other enemy aircraft were damaged. All the Kittyhawks returned. The American dive bombers made successful attacks on Lae on the 7th and 11th, damaging anti-aircraft positions, setting fire to fuel, and exploding ammunition dumps. On the second of these attacks the Kittyhawk pilots who provided cover for the dive bombers met a large force of Zeros over the target. Piper shot down two and Flight Lieutenant Cox and Flying Officer Masters[5] one each. One pilot, Sergeant Brown,[6] was forced down on a beach near Lae with a damaged aircraft. Shortly afterwards, in company with the pilot and observer of a Dauntless that had been shot down, he was taken prisoner. In a fierce encounter on the 13th, Pilot Officer Channon[7] shot down one Zero and probably another and one Kittyhawk pilot, Flying Officer Davies,[8] was shot down by Zeros. Squadron Leader Cresswell,[9] the commanding officer of No. 76 Squadron, was killed

[4] W Cdr G. C. Atherton, DFC, 408030. 25, 24 and 75 Sqns; Controller 9 Fighter Sector 1943; comd 82 Sqn 1943-44, 80 Sqn 1944; Wing Ldr 78 Wing 1944-45; CI 8 OTU 1945. Accountant; of Launceston, Tas; b. Launceston, 27 Sep 1919.

[5] F-Lt P. A. Masters, 407330. 4, 75, 86 and 80 Sqns. Public servant; of Burnside, SA; b. Mymensingh, India, 23 Dec 1920.

[6] Sgt D. S. Brown, 401489. 22 and 75 Sqns. Salesman; of South Yarra, Vic; b. Castlemaine, Vic, 9 Dec 1916. Died while a prisoner of war 26 May 1942.

[7] F-O O. J. Channon, 411286; 75 Sqn. Insurance clerk; of Goulburn, NSW; b. Wyalong, NSW 23 May 1917. Killed in action 24 Apr 1942.

[8] F-O A. C. C. Davies, 406124. 23 and 75 Sqns. Clerk; of Nedlands, WA; b. Gnowangerup, WA, 24 Jan 1921. Killed in action 13 Apr 1942.

[9] Sqn Ldr B. B. Cresswell, 82. Comd 4 and 76 Sqns 1942. Regular air force offr; of Perth, WA; b. Fremantle, WA, 30 Nov 1912. Killed in action 17 Apr 1942.

while flying a 75 Squadron aircraft when Zeros intercepted him on the 17th when returning from an early morning reconnaissance over Lae. Cresswell's aircraft apparently crashed into a hill while he was diving through cloud. Flying Officer Woods, who was accompanying him, got back to the base though his aircraft was damaged. That day Flight Lieutenant Jackson shot down his third enemy aircraft and Masters and Flying Officer Tucker[1] shared another Zero, as did Flight Lieutenant Boyd[2] and Atherton next day when 8 Kittyhawks intercepted 8 enemy bombers with Zeros as escort over Port Moresby. In this action Sergeant Granville[3] was killed. Six days later the squadron lost 3 of 6 Kittyhawks which intercepted a large formation of Zeros over Port Moresby. Channon, who led a flight of four, was killed when his aircraft was shot down. Forced down, Flight Sergeant Butler[4] landed at high speed in a patch of kunai grass with his undercarriage still retracted, but he escaped injury. Flight Sergeant Crawford[5] also escaped when he was forced down into the sea several miles from Port Moresby after a bullet from an attacking Zero had shot off his throat microphone and seared his neck. In this combat Flight Lieutenant Jackson shot down another Zero.

It was obvious that without relief or reinforcement No. 75 Squadron could not survive much longer. On the morning of the 28th the unit's five serviceable aircraft took off to meet an enemy force of eight bombers with fighter escort. Squadron Leader Jackson led the flight, the other four pilots being Flying Officers Brereton,[6] Cox, Masters and Sergeant Cowe.[7] They intercepted the Japanese bombers at 22,000 feet to find the Zeros flying in close cover except for two which were "standing off". In tight formation the five Kittyhawks made a rear attack on the bombers. The leading Zero dived on Jackson's Kittyhawk. To evade the attack Jackson stalled his aircraft and spun down, the other four pilots following his example. In the battle that followed Jackson and Cox both lost their lives, one of them having first shot down a Zero. Brereton's Kittyhawk was damaged and he was severely wounded, but he succeeded in landing safely. When Masters pulled his Kittyhawk out from its spin he found himself some distance out to sea to the south-east of Port Moresby. As he turned back to base he sighted what he took to be a submarine for which several Dauntless aircraft later searched in vain.

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[1] F-Lt A. D. Tucker, 405432. 75 and 86 Sqns. School teacher; of Margate Beach, Qld; b. Brisbane, 5 Mar 1920.

[2] Sqn Ldr A. H. Boyd, 561. 3, 76 and 75 Sqns; comd 101 and 110 Fighter Control Units 1944; 67 Sqn. Regular air force offr; of Delungra, NSW; b. Quirindi, NSW, 17 Mar 1916.

[3] Sgt R. J. C. Granville, 403923. 22 and 75 Sqns. General merchant; of Double Bay, NSW; b. Parramatta, NSW, 17 Apr 1920. Killed in action 18 Apr 1942.

[4] F-O M. S. Butler, 407220. 12, 75 and 23 Sqns. Agriculturalist; of Medindie Gardens, SA; b. Bournemouth, Eng, 27 Mar 1918.

[5] F-Lt R. W. Crawford, DFC, 402642. 12, 75 and 78 Sqns. Clerk; of Dulwich Hill, NSW; b. Sydney, 22 Nov 1921.

[6] Sqn Ldr J. Le Gay Brereton, 260697. 75, 20, 11 and 38 Sqns. Clerk; of Sydney; b. Old Junee, NSW, 22 Dec 1919.

[7] Sgt W. D. Cowe, 401769; 75 Sqn. Bank clerk; of Melbourne; b. Eccles, Scotland, 8 Jun 1921. Killed in action 28 Aug 1942.



(*Australian War Memorial*)

The seventy-eighth raid on Port Moresby, 17th August 1942. After a complete lull in attacks from 1st August the Japanese surprised the defenders. Dropping 150 bombs in perfect pattern on the Seven Mile aerodrome they destroyed 5 aircraft, severely damaged 11 others and wrecked the control tower and operations room.



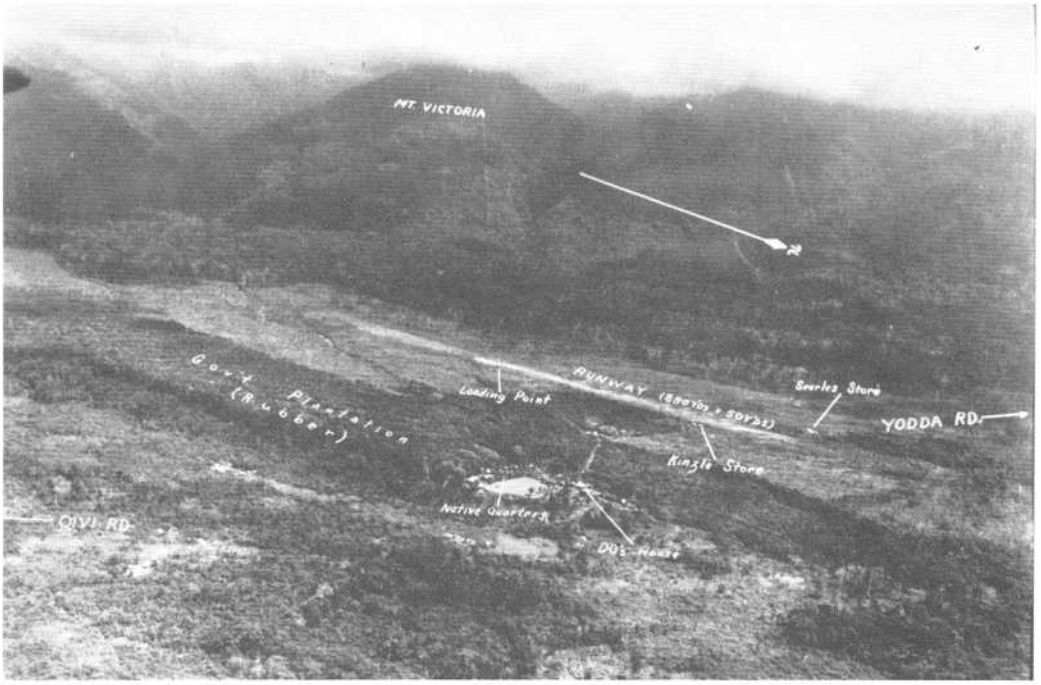
(*Australian War Memorial*)

A petrol dump from which the Japanese had intended to fuel supporting armour in their assault on Milne Bay devastated on the foreshore by strafing from R.A.A.F. Kittyhawks. Near by is a destroyed landing barge. On 25th-26th August 1942, when the Japanese were making their landings, the Kittyhawks of Nos. 75 and 76 Squadrons sought out and destroyed at least 19 enemy barges carrying men and equipment.



(*R.A.A.F.*)

From the time of the Japanese occupation of Lae in March 1942 until its recapture by the 7th Division in September 1943 the R.A.A.F., and later Allied Air Forces, with fighters, fighter-bombers, medium and heavy bombers and flying-boats, maintained a persistent bombardment of the aerodrome and Japanese installations. In the upper photograph, a Boston comes in at tree-top level over a wrecked fighter in the right foreground, a parked Betty bomber in the centre, and dispersed Zero fighters in the background. The lower photograph shows a bombing attack on 7th August 1942, delivered at 3,400 feet.



(*R.A.A.F.*)

Kokoda, 10th September 1942.



(*Australian War Memorial*)

A Douglas C-47 transport aircraft of Allied Air Forces dropping supplies to the 25th Brigade near Nauro in the Owen Stanleys in October 1942.



(R.A.A.F.)

A Beaufighter of No. 30 Squadron (pilot F-O R. J. Brazenor; observer Sgt F. B. Anderson) flying along a valley in the Owen Stanley Range during an operation in late 1942. The photograph was taken by Sgt W. B. Ball in an accompanying Beaufighter.



(Allied Air Forces, S.W.P.A.)

All that remained of the Wairopi Bridge over the wide and swift-flowing Kumusi River after the bridge had been bombed and strafed by Allied Air Forces on 21st October 1942.

Next day, mourning the loss of their leader, the squadron warmly accepted his brother as their new commanding officer.

On the night of 28th April at 10.58 p.m. during the thirty-third raid on Port Moresby the Japanese bombers dropped, with their bombs, four packages each with a white streamer bearing the message:

> Any person who has received this package is cordially requested to send it over to the Army Headquarters of Port Moresby.

Each package contained about 100 letters from military and civilian prisoners held by the Japanese in Rabaul.

On 30th April, having flown 638 hours for the month and having been reduced to three serviceable and seven unserviceable aircraft, No. 75 Squadron was relieved from the heavy responsibility for the air defence of Port Moresby: a responsibility the squadron alone had borne since 21st March, 13 days after the Japanese had landed on the north coast of New Guinea.

Relief came in the form of two American Airacobra units—Nos. 35 and 36 Squadrons of No. 8 Pursuit Group—whose 26 aircraft were led in to the base by Lieut-Colonel Boyd D. Wagner. Popularly known as "Buzz", this battle-seasoned fighter pilot from the Philippines campaign had been appointed director of pursuit operations in the Port Moresby area. He faced a heavy task, for the facilities available to him to service aircraft were little if any better than those of No. 75 Squadron and, in strength, his units had already suffered severely even before making contact with the enemy—11 Airacobras had been lost in transit from the Australian mainland. The Airacobra was noted for its structural strength, good fire-power, and its leak-proof tanks, but, as Wagner probably realised only too well from combat in the Philippines, and as the squadrons were to learn only the day after their arrival, when they lost four aircraft and their pilots in a strike against Lae, it was still no match for the highly manoeuvrable Zero. In this their first important engagement in the South-West Pacific Area the American pilots claimed three enemy aircraft shot down.

The now almost insignificant strength of No. 75 Squadron was reduced still further on 2nd May when their 3 combat-worthy Kittyhawks took off with 7 Airacobras to intercept a large formation of enemy aircraft. Sergeant Munro[8] was shot down in combat and a Kittyhawk piloted by Flight Sergeant West[9] crashed on take-off and had to be written off. Next day the squadron recorded the last operational sortie before being recalled; Tucker took off to join 8 Airacobras in intercepting 20 enemy bombers escorted by Zeros. But the weariness of machine as well as man was emphasised when engine trouble forced him to land without making contact with the enemy. Despite all their difficulties the squadron's mainten-

[8] Sgt D. W. Munro, 405641; 75 Sqn. Bank clerk; of Brisbane; b. Brisbane, 10 Oct 1922. Killed in action 2 May 1942.

[9] F-O H. G. West, 411561; 75, 77 and 80 Sqns. Farmer and orchardist; of Orange, NSW; b. Orange, 7 Sep 1920.

ance parties worked on so that when, on 7th May, the main strength of the unit embarked in the *Taroona* for Australia they had restored 3 of the 5 remaining Kittyhawks to flying, if not combat, condition. The commanding officer with three other pilots and a party of 27 ground staff remained to complete the task of handing over to the American squadrons. On the morning of the 9th the three airworthy Kittyhawks and several Dauntless dive bombers, also listed for return to the mainland, were on the Three Mile aerodrome when Zeros dived on them without warning. Two of the Kittyhawks and two of the dive bombers were damaged. Jackson took off in the remaining Kittyhawk and flew to Cairns. One of the other two was repaired and two days later it was flown to the mainland by Sergeant Butler.

In the 44 days in which they had been in operation from Port Moresby No. 75 Squadron pilots had destroyed 35 enemy aircraft (18 in combat and 17 on the ground), probably destroyed 4 and damaged 47 (29 in combat and 18 on the ground). Flight Lieutenant Jackson had shot down four aircraft, Piper was credited with three and a half, and Masters two. The unit had lost 12 pilots killed or missing (including one on attachment and one while ferrying an aircraft from Townsville) and 22 aircraft—9 in known combat, 4 reported missing, 3 on the ground from enemy action, and 6 in accidents. Original and replacement aircraft provided for the squadron had numbered only 31 and of these 10 had been either destroyed or damaged by enemy action in the first three days. The strain was so severe that throughout the period the unit's daily average of combat-serviceable aircraft was only five. This was no reflection on the competence of the maintenance crews who worked almost without ceasing under extremely difficult conditions. Though the odds had been against them the balance in losses was substantially in the squadron's favour and, more important, they had defended the base valiantly, forcing the enemy's bombers to maintain a respectful altitude and accept a heavy price for their attacks.

To the troops on the ground the Kittyhawks and their pilots had a magical quality; they were *ours*. In a simple and naturally self-centred way the ground troops came to idolise the "Never-hawk" pilots. They did so from the moment, so soon after the squadron's arrival, when Wackett shot down the first enemy aircraft. An Australian war correspondent who watched this attack and saw the enemy bomber "streaming straight down the sky with a ribbon of white smoke behind it" expressed the release of pent-up feelings experienced by those on the ground when he wrote:

> We onlookers fell on one another's necks, howling hysterically with joy. For miles around, men found that they had business at the airfield. They came roaring up the road on lorries, cheering and laughing. They stopped, poured out of the vehicles, and stood staring with a mixture of awe and disbelief at the fighters on the ground. . . .[1]

[1] Osmar White, *Green Armour* (1945), p. 58.

Late in May flights of No. 35 Fighter Group equipped with Airacobras began to relieve the pilots of No. 8 Group who had now been in action since the beginning of the month. That the strain on the fighter pilots had been heavy was indicated by the number of enemy raids on Port Moresby during May—21. These had ranged from minor attack to one in which the Japanese had used 34 bombers and 15 fighters, their bombs and gunfire disrupting the water-supply and destroying the fuel dumps and three fighters on the ground. It was estimated that in the course of the month more than 40 enemy aircraft had been destroyed, but the Airacobras too had paid a cost—to the end of May between 20 and 25 had been lost in combat, 8 in forced landings and 3 on the ground.

There was at this time only one region in New Guinea where Allied troops were in direct contact with the enemy. This was in the jungle and rain forest between an imaginary line from Wau to Bulolo and the coastline between Lae and Salamaua. Here "Kanga Force", as it was known, was engaged in guerilla warfare. The veterans of this force were the New Guinea Volunteer Rifles stalwarts who had taken to the jungle after their demolition work at Lae and Salamaua in the face of the Japanese landings. Fresh blood had been provided by the men of the 5th Independent Company, commando-trained troops who, except for a party that had made the journey overland from Port Moresby as a test, had been flown in to Wau 300 strong, on 22nd May, by the American No. 21 Troop Carrier Squadron, four of whose aircraft were supplemented by two chartered Australian National Airways DC-3's. For this swift movement the Airacobras had provided fighter cover. The airlift, which was accomplished without incident, was the beginning of a ferry service that for many months to come was to operate into Wau's somewhat hazardous hillside aerodrome with its runway dropping 300 feet in its 3,300 feet length—the farthest north Allied air supply terminal. Forward of Wau Kanga Force patrols fought not only the enemy but the jungle itself with its intense humidity, interminable mud, malaria, dysentery, tropical ulcers and the exhaustion that came of it all. It was these troops who struck by night at Salamaua and elsewhere, slaying and retiring, in punishing raids that helped to wear down the enemy.

While the steady development of Allied air activity in the Port Moresby area meant that the aerodrome received special attention from raiding Japanese bombers, the harbour also offered attractive targets on occasions. This was proved on 16th and 17th June when attacking aircraft concentrated on Allied shipping and particularly the motor vessel *Macdhui* then discharging cargo. In the attack on the 16th the Japanese bombers scored direct hits on the vessel causing some damage and several casualties which included the ship's surgeon, Dr C. Tunstall, who was killed. But when the raid ended *Macdhui* was still afloat and the damage was judged repairable. Next day the raiders returned and renewed their assault on the harbour. Their pattern bombing was extremely accurate and the damaged *Macdhui* again became the principal victim. Several bombs hit

the vessel, which still had inflammable and explosive cargo in her holds, and serious fires broke out. It was soon apparent that she was doomed and her commander, Captain J. Campbell, who had remained on the bridge throughout the attack, gave the order to abandon ship.

Three R.A.A.F. medical officers, in company with several orderlies, had been watching the attack from the hospital on the hillside overlooking the harbour. Aware that Dr Tunstall had been killed the day before, they hurried to the waterfront and set out in a launch towards the burning ship. Seeing the *Macdhui*'s boats putting off laden with men they realised that the ship was being abandoned. The helmsman of the launch was ordered to stand off, but at that moment a man was seen waving feebly from the ship's stern rail. Immediately the launch was brought under *Macdhui*'s stern to where a Jacob's ladder was hanging over the side. One of the doctors, Flight Lieutenant Bond,[2] followed closely by three orderlies, climbed to the deck where they found a steward, William Drury, lying gravely wounded. He had dragged himself to the rail in an endeavour to attract attention. While the ship blazed fiercely forward of where they worked, Bond and the orderlies tended the wounded man and then, using a mattress dragged from the crew's quarters aft and a coil of rope, they improvised a sling in which they lowered the patient into the launch, following him with all speed and getting the launch clear of the ship's side just as her cargo began to explode. Drury was taken to hospital where, next day, he died from his wounds. *Macdhui,* burning fiercely, drifted in the harbour until eventually she grounded in shallows where she became a burned-out hulk.

Under pressure of heavy and more frequent enemy air attacks on Port Moresby the vulnerability of the Catalina base in the harbour was emphasised. In June Bowen, south of Townsville, was selected as a reasonably well located and much safer base for their operations, and Nos. 11 and 20 Squadrons moved to that port. Meanwhile (on 29th May) the Catalina crews had made their first attack on their recently evacuated advanced base at Tulagi. For this and subsequent attacks on Tulagi the flying-boats alighted for refuelling at Belap Island, off the northern tip of Noumea. A U.S. Navy seaplane tender, the *Curtis,* was based at Noumea at the time and on this first Tulagi raid the R.A.A.F. aircraft were joined by three American Catalinas. Inexperienced in the area, none of the American crews found the target. The Australian crews showed special zest in attacking Tulagi. Four aircraft raided it on the night of 1st June and again on the nights of 25th and 26th June, descending to low level for gunnery attacks after dropping their bomb-loads. One crew member in an aircraft piloted by Squadron Leader Chapman even used a Tommy-gun. Reports suggested that in the raids on the 25th and 26th about 600 Japanese troops were killed. The raids were so successful that they were repeated as often as other operational responsibilities permitted.

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[2] **Sqn Ldr J. A. Bond, 261488. 1 RAAF Hospital, RAAF Stn Port Moresby, 21 Base Wing, 2 OTU, 11 Sqn and 2(T) Gp. Medical practitioner; of Bathurst, NSW; b. Bathurst, 7 Sep 1915.**

An incident after one of these raids led to the deletion of the red circle in the rondels of all R.A.A.F. aircraft. Returning from the attack on the 26th, one of No. 11 Squadron's aircraft, captained by Flying Officer Seymour,[3] came in to alight on Havannah Harbour at Efate. Ground control at the Noumea base had reported the Catalina as an unidentified aircraft and the pilot of an American Navy Grumann Wildcat fighter was ordered to investigate it. The red circles on the Catalina's wings were so distinct that the American pilot mistook them for Japanese markings and, all too promptly, attacked. The fuel tanks and port aileron of the Catalina were damaged by the Wildcat's gunfire and two bullets passed through the main crew compartment, one of them close behind the head of the second pilot, Sergeant Bramell.[4] Seymour held the Catalina steadily on its glide and brought it down safely on the harbour. After the damage had been temporarily patched, Seymour flew his aircraft to Noumea where mechanics from the American tender *Curtis* made effective repairs.

In this period, Lae, Salamaua and Rabaul were also targets for Nos. 11 and 20 Squadron crews. On the night of 27th June two of their aircraft, one piloted by Squadron Leader Atkinson and the other by Flight Lieutenant Higgins were over Lae and Salamaua continuously for four hours. The report of the operation stated that the aircraft had dropped "eight 500-lb bombs, twenty 20-lb fragmentation bombs and four dozen empty beer bottles". On the well-established principle that the greater the disturbance to the enemy's sleep the lower would be his morale the crews added the bottles to the bomb-load, throwing them out at intervals between bomb release and so adding to the sound effects, the noise they made being something between a shrill whistle and a scream.[5] Another and more official way of attacking the enemy's morale was the practice adopted by the Catalina squadrons (as it was by other bomber units both Allied and Japanese) of dropping bombs fused for explosion after six to twelve hours' delay. On 30th June three Catalinas took part in a coordinated attack against Lae with a formation of American Mitchell bombers of No. 13 Bombardment Squadron which had staged through Port Moresby for the purpose.

In this period No. 32 Squadron was based with its Hudson aircraft at Horn Island, a place of considerable value as a staging point between the Australian mainland and New Guinea and also as a reconnaissance base. It was for this last purpose that the Hudsons were based there. In June's 30 days the squadron made 52 seaward reconnaissance and patrol flights in addition to many convoy protection sorties. These usually monotonous and always exacting tasks were interspersed with occasional and

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[3] Sqn Ldr R. M. Seymour, DFC, 406062. 11 Sqn and Trans Pacific Air Ferry Service; comd 43 Sqn 1945-46. School teacher; of Busselton, WA; b. Busselton, 3 Sep 1918.

[4] F-Lt J. B. C. Bramell, 411279. 9, 11 and 38 Sqns. Assistant Resident Magistrate; of Papua; b. Belmore, NSW, 19 Dec 1912.

[5] This practice was also adopted by other RAAF squadrons as circumstances permitted.

unexpected diversions as when, on 11th June, Squadron Leader Pedrina evacuated personnel from Wau and the crew of one Hudson piloted by Flying Officer Halliday[6] made the most of a chance to change their role to the attack and shot down a four-engined flying-boat which they encountered on their patrol route to the south of New Britain. On the 13th an aircraft flown by Flight Lieutenant Manning[7] attacked and sank a wooden vessel off Siberi Island and machine-gunned the village. Another variation was provided by supply-dropping sorties, notably to a naval coastwatcher on Bougainville.

Growing air activity on Horn Island had not escaped the attention of enemy reconnaissance aircraft. On 11th May the base received its fourth air attack when 9 bombers, accompanied by 4 Zeros, destroyed a quantity of equipment. On 7th June, at midday, 16 bombers dropped between 180 and 200 bombs on the R.A.A.F. station. The tented camp, buildings and equipment were extensively damaged and three airmen in the camp were wounded. Though this raid suggested that a determined effort was being made to make the Torres Strait base unusable, no further attack was made on it until 30th July when a lone bomber on armed reconnaissance succeeded in damaging five of No. 32 Squadron's Hudsons in the dispersal area. Another single-aircraft attack was made two days later. This was ineffectual, the bombs falling harmlessly into the sea. It was virtually the last air attack on Horn Island.[8]

The Australian-built Beaufort made its first bombing attack—the task for which it had been designed—on the night of 25th June. The first unit to receive the new aircraft was No. 100 Squadron R.A.A.F. The number was derived from the R.A.F. squadron that had fought with forlorn distinction in Malaya until its obsolete Vildebeeste aircraft and most of its pilots had been lost. The Australian unit had been formed at Richmond as recently as 25th February, and in March Squadron Leader Balmer was appointed its first commander. From within both the R.A.A.F. and the aircraft industry the squadron was to be watched with more than ordinary interest because now, it seemed, Australia's capacity to produce a first-line aircraft was being put to the test. The unit had moved to Mareeba, inland from Cairns in May. From there, on a rapidly growing airfield that was to accommodate American as well as Australian bombers, the crews gained their operational grooming on reconnaissance patrols, and it was from Mareeba that they staged on their first strike. Several aircraft had been sent to Port Moresby for what was known as an orientation course to acclimatise the crews and watch the behaviour of their aircraft in equatorial conditions. Two of these crews, one captained

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[6] F-Lt L. Halliday, 406480. 32 Sqn, 380 Gp USAAF and 23 Sqn. Advertising manager; of Perth, WA; b. Perth, 14 Nov 1919.

[7] W Cdr L. W. Manning, DFC, 290489. 7, 32, 6, 24 Sqns and 528 Sqn USAAF. Regular air force offr; of Peppermint Grove, WA; b. Perth, WA, 16 Apr 1917.

[8] On the night of 28th June 1943, almost a year later, a single enemy bomber, apparently on reconnaissance, was picked out by the Horn Island searchlights. It jettisoned its bombs into the sea and flew away. This was the last Japanese aircraft over north-eastern Australia.

by Squadron Leader Sage[9] and the other Flight Lieutenant Douglas,[1] were temporarily based on Port Moresby when the order was given to strike at an enemy ship reported to be approaching Lae. On the 25th June Balmer led a flight of five Beauforts to the New Guinea base. That night, with Sage and Douglas taking their aircraft in to Salamaua on a diversionary strike, the other five Beauforts took off at intervals of 20 minutes with Balmer's aircraft leading. It was moonlight and the weather was reported to be clear over the target area. At 9.45 p.m. Sage and Douglas bombed the Salamaua isthmus area from 1,500 feet and then raked the ground installations and the buildings known as Chinatown with gunfire. Douglas' aircraft returned safely, but at 10.44 the operations room at Port Moresby received a message from Sage asking for a bearing. The aircraft then appeared to be about 60 miles north-west of Port Moresby. That was the last that was heard from it: Sage and his crew, Flying Officer Wormald,[2] Flight Sergeant Patterson[3] and Sergeant Desmond,[4] were lost.

On the information available it seemed that the enemy ship would be close to Lae by the time the Beauforts began reaching the target area. Balmer anticipated that the ship's captain, when he realised that Salamaua was under attack, would alter course to the east to avoid detection. Estimating the ship's speed at eight knots Balmer then plotted a course for it and adjusted his own accordingly. At 10.30 p.m. the Beaufort came out over Huon Gulf and proved Balmer's prediction completely accurate: directly beneath them the enemy ship could be seen steaming on the moonlit waters of the gulf. Lining up the target in the moon path, Balmer dived to 50 feet and made his bombing run but the bombs failed to release. A second run was made with the same result. The enemy's anti-aircraft fire had intensified but, determined to strike, Balmer made a third run. This time the aircraft was at 100 feet. Instead of chancing the faulty release gear, he jettisoned the bombs so that all dropped at once. As he pulled away from the target his rear gunner reported two flashes from the ship indicating that it had been hit. The second Beaufort, piloted by Flight Lieutenant Thompson,[5] made two low runs over the ship and scored a direct hit each time, and the third aircraft, captained by Squadron Leader Bernard,[6] also scored a direct hit. The ship now appeared to be disabled and sinking. Bernard's aircraft had been severely damaged by anti-aircraft fire and the crew doubted whether they would reach Port Moresby, but

[9] Sqn Ldr C. W. L. Sage, 255, 6 and 100 Sqns. Regular air force offr; of Mathoura, NSW; b. Fitzroy, Vic, 20 Mar 1915. Killed in action on night of 25-26 Jun 1942.

[1] W Cdr L. A. Douglas, DFC, 403, 1, 100 and 13 Sqns; comd 2 Sqn 1945-46. Regular air force offr; b. 1 Jun 1919.

[2] F-O J. A. Wormald, 402812; 100 Sqn. Salesman; of Vaucluse, NSW; b. Sydney, 24 Sep 1918. Killed in action on night of 25-26 Jun 1942.

[3] F-Sgt C. F. Patterson, 401048. 100 Sqn RAF and 100 Sqn. Clerk; of Brighton, Vic; b. Calcutta, India, 24 Nov 1917. Killed in action on night of 25-26 Jun 1942.

[4] Sgt D. W. Desmond, 405839; 100 Sqn. Clerk; of New Farm, Qld; b. Toowoomba, Qld, 20 Jan 1923. Killed in action on night of 25-26 Jun 1942.

[5] W Cdr R. H. Thompson, DFC, 260285. 3 and 100 Sqns; comd 100 Sqn 1943-44, 14 Sqn 1944-45. Apprentice carpenter; of Kirribilli, NSW; b. Sydney, 7 Jun 1918.

[6] Sqn Ldr C. S. Bernard, 259, 7 and 100 Sqns. Regular air force offr; of Hamilton, NSW; b. Botany Bay, NSW, 11 Sep 1916. Killed in action 28 Sep 1942.

Bernard nursed it home and made a successful wheels-up landing. The pilots of the other two Beauforts, Flight Lieutenant Ryan[7] and Flying Officer Elcoate,[8] attacked Lae, dropping their bombs on what was known as the "Terrace", where the main Japanese anti-aircraft batteries were placed. Both aircraft returned safely. Next day a reconnaissance crew reported that the ship had been sunk but this was never confirmed.[9]

In North-Western Area in the second quarter of 1942 the enemy's pressure had been as unrelenting as in the New Guinea area, though there had not been the same frequency of attack and the fighting had not been at such close quarters. Japanese tactics were to conduct harassing raids against the bases in the north; Darwin, of course, received the greatest concentration of attacks. Nine enemy bombers had penetrated 180 miles inland to Katherine on 22nd March, the same day that the American Kittyhawks made their first interception. But, though the formation was large for such a task, it was more an armed reconnaissance than a raid: only one stick of bombs had been dropped and that from high altitude. An aborigine was killed, another wounded and some damage was done to the aerodrome. Wyndham had its second raid on the 23rd when seven bombers blasted the aerodrome leaving a chain of about 30 large craters, but there was no other damage. About an hour later three enemy fighters on a marauding flight came in low over the aerodrome, firing their guns. The effect was negligible.

On 25th March Air Commodore Bladin replaced Air Commodore Wilson in command of North-Western Area. On the previous day Central War Room had issued a significant warning in a situation report. In part this read:

> Recent Intelligence indicates the concentration of five aircraft carriers in the Celebes area, including two new arrivals from Japan; also the presence of a number of military landing craft and a probable landing-craft carrier at Koepang. This . . . with air raids on the northern part of Australia and information of an operation timed for the end of the month, gives indications that an attack on Australia from the Netherlands East Indies area may occur by the end of the month.

The effect of this signal was to establish invasion as an imminent possibility and in such circumstances, as mentioned earlier, absolute control of land, sea and air forces in the area passed to the commander of the land

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[7] W Cdr J. P. Ryan, 290621. 8 and 100 Sqns; comd 6 OTU 1943-44, RAAF Stn Darwin 1944-45. Dental surgeon; of Perth, WA; b. Kalgoorlie, WA, 24 Sep 1916. Killed in aircraft accident 11 Sep 1945.

[8] F-O R. T. W. Elcoate, 712; 100 Sqn. Hardware salesman; of Cloncurry, Qld; b. Echuca, Vic, 21 Feb 1918. Killed in aircraft accident 12 Jul 1942.

[9] There was some confusion in the recording of the result of this attack. RAAF squadron and base records credited Balmer, Thompson and Bernard with the sinking of the ship which in some reports is referred to, incorrectly, as the *Tenyo Maru*. Post-war investigations by the US Joint Army-Navy Assessment Committee which were made with reference to enemy records, do not account for any ship having been sunk in this attack. The Committee's records show that, in all, three enemy vessels were sunk off Lae up to this time (25th June 1942). These were: *Kongo Maru*, 8,624 tons, and *Tenyo Maru*, 6,843 tons, both sunk by USN carrier aircraft on 10th March 1942, and *Taijun Maru*, 1,274 tons (by USAAF aircraft) on 11th April 1942. Sunk off Salamaua on 10th March by USAAF and USN carrier aircraft jointly was *Yokohama Maru*, 6,143 tons.

forces. Consequently General Herring,[1] recently arrived from the Middle East, who had just been appointed to command the land forces in the Darwin area, called Bladin and the Naval Officer-in-Charge, Commodore Pope,[2] into conference. As a result Air Headquarters was established beside Herring's headquarters at a point on the road 18 miles south of Darwin. Communication with the airfields was by temporary field telephone plus a wireless mounted in a lorry. The army formations took up battle stations in the headquarters area and to the north and west. Dawn and dusk air patrols to seaward were maintained to give warning of the approach of an enemy convoy and the single-engined Wirraways operated in-shore patrols in case commando parties were landed. Plans were made to move all air force units from the forward area; even Batchelor, 55 miles to the south, was not considered entirely safe and plans were made to station the fighters on claypan flats near Adelaide River, where fuel, oil and ammunition were placed. If invasion had taken place the one arterial road would have been crowded with army troops moving up, and therefore a separate north-south route for air units was reconnoitred.

Whether the other evidence was convincing or not, the air raids on Darwin and adjacent bases certainly suggested some special enemy purpose. Between 28th March and 27th April there were nine Japanese air attacks in the Darwin area. In two of them there was no interception by the American Kittyhawk pilots, but for the other seven the enemy paid a big price: 17 bombers and 11 fighters destroyed, 2 bombers and 4 fighters probably destroyed and one bomber damaged. Their loss in aircraft crews was therefore very severe. Two of the bombers were shot down by the guns of the anti-aircraft batteries, but the American fighter pilots accounted for all the other enemy aircraft destroyed. Eight Kittyhawks were lost in combat, and one was damaged, and three pilots were killed. Casualties on the ground totalled four R.A.A.F. airmen and one American serviceman killed and 12 R.A.A.F. airmen wounded. Damage caused by these raids was not very extensive, the most severe being on 2nd April when a bomb hit a tank with storage for 200,000 gallons of fuel from which about 30,000 gallons were lost, and on the 27th when buildings and water and power supply lines at the R.A.A.F. Station, Darwin, were damaged by bomb hits.

The invasion threat provided very good reason, if one were needed, for a swift stocktaking by the new air commander. Bladin found that the ability of his units to move, or, indeed, to operate on their air strips, was gravely affected by the lack of light vehicles. Aircrew and mechanics had partly remedied the lack of airfield runabouts by piecing together parts from motor vehicles found lying about after the departure of the

[1] Lt-Gen Hon Sir Edmund Herring, KCMG, KBE, DSO, MC, ED. (1914-18: RFA in France and Macedonia.) CRA 6 Div 1939-41; GOC 6 Div 1941-42, NT Force 1942, II Corps 1942, I Corps and NG Force 1942-43, I Corps 1943-44. Chief Justice of Victoria since 1944, Lieut-Governor since 1945. Of Melbourne; b. Maryborough, Vic, 2 Sep 1892.

[2] Rear-Adm C. J. Pope, CBE. RN 1902-19; transferred RAN 1919. (HMAS *Sydney* 1914-19.) Comd HMS *California* 1939-41; NOIC Darwin 1942, Fremantle 1943-46. Of Sydney; b. Tring, Eng, 2 Mar 1887. Died Aug 1959.

civilians from Darwin, and General Herring made scores of utilities available to the R.A.A.F. (the U.S.A.A.F. had ample jeeps, command cars and specialised vehicles).[3]

In addition Bladin found that the air units were scattered from Darwin to Daly Waters, communications were poor and the radar early-warning system was inadequate to give the Americans enough time to fly their relatively slow-climbing Kittyhawks to the height of the incoming enemy fighters and bombers. No. 808 U.S. Airfield Construction Squadron hurriedly constructed two new airstrips for the American fighters. These were made by the ingenious method of choosing stretches of the north-south highway which ran north-west and south-east (the directions of the two prevailing winds), widening them, and providing dispersal areas round a camp site at one end and round petrol and ammunition stores at the other. Batchelor was further developed for the third U.S. fighter squadron.

The Hudson squadrons were moved forward again, in May, from Daly Waters, No. 13 going to Hughes and No. 2 back to Darwin, with its headquarters at Rapid Creek where the men could bathe and at the same time live a few miles from the main Japanese target—R.A.A.F. Station, Darwin.

Combat training, rifle shooting, and route marches with full equipment were initiated for air force men. Airfield guards were grouped into one unit and given infantry training, sections alternating between guard duty at outlying airfields, radar stations and so on, and periods with the training unit. The early-warning system was expanded as new sets became available. To improve the warning system the Australian Navy placed a ship on patrol on the direct route to Koepang. In a lull in the raids (between 5th and 25th April) a second R.D.F. station was installed at Point Charles on the western extremity of the entrance to Port Darwin. The suitability of this equipment for tropical service was questioned but it certainly increased the early-warning capacity of the defences.

Few in number and lacking fighter cover, the crews of the Hudsons of Nos. 2 and 13 Squadrons continued to reconnoitre enemy ports for signs of the assembly of convoys and to strive to prevent the enemy from consolidating their newly-won bases on Timor and Ambon. Koepang, with its harbour and aerodrome facilities, was obviously a primary target but the aircraft also made raids on Ambon and Dili, and made supply-dropping sorties to aid the R.A.A.F. rear party and the 2/2nd Independent Company which continued to fight the Japanese in Portuguese Timor. Long-range reconnaissance flights to enemy bases such as Kendari were beyond the capacity of the Hudsons, though one crew, airborne for nine hours and a half, reached Sumbawa Island on one sortie. For attacks on Koepang the bomb-load was limited to 1,000-lb and for Ambon to only 500-lb. The enemy bombers, for their part, could carry a bomb-load of 2,000-lb for an attack on Darwin.

[3] North-Western Area was constantly clamouring for much-needed stores and equipment at this stage. In an effort to stir RAAF Headquarters into action Wing Commander K. T. Nicklin, RAF, the senior equipment officer, sent off the following signal: "Request urgent air despatch 5000 pairs shorts, khaki drill to cover 5000 bare bottoms now held in this Command." A sharp rebuke promptly arrived from Melbourne, but the shorts soon followed.

The enemy aircraft carrier movements that caused anxiety in Australia, as indicated by the Central War Room's warning, did not in fact become an actual threat to the North-Western Area; the enemy's purpose lay elsewhere.[4] The activity of enemy fighter aircraft from Penfui showed that the Japanese had quickly repaired the damage caused by R.A.A.F. and A.I.F. demolitions. On one sortie in March the crew of a Hudson captained by Flying Officer McCombe,[5] made the first (and unsuccessful) attempt to drop supplies to the R.A.A.F. party on Timor, and then reconnoitred Penfui. They returned to report 36 enemy aircraft lined up on the aerodrome. Rather over-optimistic plans were made for an Allied attack. Heavy bombers were to come from the south and special fighter cover was to be provided for these aircraft while they refuelled at Darwin.

An additional American Kittyhawk squadron had arrived on the 17th, but no heavy bombers came, and the operation fell to the lot of the Hudson crews—to "all available Hudson aircraft less one" as the order stated. This in fact meant three aircraft and the result was poor indeed for two of them failed to reach the target because of bad weather. Next morning a better effort was made and six Hudsons bombed the Japanese base, starting fires that were still visible when the aircraft were 50 miles away on their homeward flight. They had encountered heavy anti-aircraft fire and some fighter interception and one Hudson piloted by Flying Officer Venn[6] was damaged and had to ditch in the sea off Cape Fourcroy on Bathurst Island. A ship picked the crew up but the aircraft was lost. On 19th and 20th March patrolling Hudsons reconnoitred Saumlaki in the Tanimbar Islands. On their second visit they dropped some bombs because reports had been received that the Japanese were establishing a base there. Seven sorties were flown against Penfui on the night of 21st-22nd. One Hudson crew captained by Flight Lieutenant Dunne saw their bombs hit the runway and start fires in the barracks area. On the 22nd a Hudson crew claimed the first Zero to be shot down over Koepang by the R.A.A.F. Next day McCombe and his crew sortied over Timor in another attempt to drop supplies (medical stores and radio batteries) to the men of the 2/2nd Independent Company. The stores were not found and the batteries were broken. Three Flying Fortresses staged through Darwin for a strike on Penfui on the 26th. They took off from Darwin, as did three Hudsons, but the American crews failed to find the target and the Hudson crews bombed it without any observed results. Next day three Hudsons attacked Tenau, scoring a direct hit on a 7,000-ton ship and probably destroying one of four moored seaplanes. On the

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[4] The Central War Room's Intelligence report was accurate. It was Admiral Nagumo's carrier force—*Akagi, Kaga, Soryu* and *Hiryu*—which had returned to Kendari where, on 24th March, they were joined by the *5th Division* (*Shokaku* and *Zuikaku*). Sending *Kaga* back to Japan for repairs and supplies, Nagumo had sortied with 5 carriers into the Bay of Bengal, as already described.

[5] Sqn Ldr I. A. McCombe, DFC, 250813. 23 and 2 Sqns, 380 Gp and 24 Sqn. Share farmer; of Casterton, Vic; b. Casterton, 7 Nov 1912.

[6] F-O J. H. Venn, 406063. 7 and 2 Sqns. Insurance clerk, of Perth, WA; b. Dardanup, WA, 29 Sep 1921. Killed in action 13 May 1942.

last day of the month four Hudsons led by Flight Lieutenant Dalkin[7] returned from Penfui with a better report; they had destroyed at least 6 grounded aircraft, damaged 4 flying-boats moored in Koepang Harbour, scored two near misses on ships and damaged shore installations. Hudsons captained by Flight Lieutenant Black[8] and Flying Officer Sharp[9] on 1st April destroyed six and damaged six more grounded aircraft on Penfui aerodrome. Crews captained by Dalkin and Flying Officer Rule[1] repeated the attack on the night of 3rd-4th April, the score being four destroyed and two damaged.

For these attacks an advanced operational base had been developed near Drysdale Mission, the crews operating from there refraining from using their radio in the vicinity and attacking at first or last light or in moonlight to reduce the risk of attracting enemy fighters. The pilots who had operated from Penfui were able to give valuable aid. But it was altogether a heavy task for which the combat-weary crews and aircraft were only just equal in staying power. In somewhat forlorn terms Air Commodore Bladin reported to R.A.A.F. Headquarters on 6th April: "No information has been received of the likelihood of this area receiving some of the B-17's reputed to be due to arrive at the rate of two a day and of the B-25's and B-26's also due to arrive." He also noted the need for a special photographic reconnaissance aircraft and asked that two such—preferably American Lightnings—should be allotted.

The supply sorties to Timor were being continued but still without much success. A Hudson crew captained by Flying Officer Badger[2] tried again on 5th April, over Point Kurus, but the parachute broke away from the package, which was not recovered. Attempts by two other Hudson crews to supply the R.A.A.F. party on the island were more successful. The crews added to this operation an attack on Penfui aerodrome where they started fires in the barracks area. Similar attacks were made on Penfui on the nights of the 12th and 13th. One of the Hudson crews, captained by Flight Lieutenant Blanchard,[3] failed to return from a reconnaissance on the night of 23rd April—another grim reminder of the enemy's fighter activity.

When it was evident that no invasion was imminent General Herring moved his headquarters to a point near Batchelor and Air Commodore Bladin moved his, on 11th May, to Berrimah. Bladin's main concern was

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[7] Gp Capt R. N. Dalkin, DFC, 260612. 2, 7 and 13 Sqns; Operations Offr North-Western Area HQ 1942-43; Chief Instructor General Reconnaissance School 1943-44; liaison duties Bomber Cd RAF 1944-45. Merchandise manager; of Salamaua, TNG; b. Northumberland, Eng, 21 Feb 1914.

[8] Sqn Ldr I. O. Black, 248. 13, 6 Sqns and 529 Sqn USAAF; comd 21 Sqn 1944-46. Regular air force offr; of Camberwell, Vic; b. Camberwell, 12 Jun 1917.

[9] Sqn Ldr A. J. Sharp, DFC, 402140. 7, 2 and 15 Sqns. Farmer and grazier; of Forbes, NSW; b. Sydney, 21 Feb 1916. Disappeared on flight off Queensland coast, 11 Mar 1945.

[1] F-Lt V. A. Rule, DFC, 407851. 13, 21 Sqns and 528 Sqn USAAF. School teacher; of Wayville, SA; b. Adelaide, 23 Oct 1914. Died 12 Nov 1958.

[2] F-Lt N. T. Badger, DFC, 407161. 6 and 2 Sqns and 528 Sqn USAAF. Horticulturist; of The Range, via Willunga, SA; b. Unley, SA, 27 May 1916. Killed in action 8 May 1944.

[3] F-Lt R. J. Blanchard, 260776. 7 and 13 Sqns. Mechanical engineer; of Coogee, NSW; b. Sydney, 22 Mar 1916. Killed in action 23 Apr 1942.

to locate his headquarters somewhere along the main telephone cable which ran between R.A.A.F. Station, Darwin, and his wireless station, 11 miles to the south; thus he would not have to rely on temporary land lines which were often accidentally cut by vehicles. Some months later, when the army had provided reliable land lines on poles, the two headquarters came together again.

In accordance with the policy of integration Bladin placed all units concerned with fighter defence under the operational control of Colonel Wurtsmith. Bladin advised Wurtsmith that experience had shown that the Japanese were unlikely to make simultaneous low-flying and high-flying raids or make two raids in quick succession and consequently the risk could be taken of sending up the fighters in maximum strength to meet the first enemy force showing on the radar screen. Also the Japanese seemed to prefer daylight take-offs and landings and therefore arrived over Darwin late in the morning or early in the afternoon.

Under Colonel Wurtsmith's experienced and realistic command, No. 49 Group had completely re-established confidence. To the end of April the Americans had lost 8 Kittyhawks and 3 pilots for an estimated enemy loss of 38 aircraft and 135 crew. In this period the heaviest Japanese assault on Darwin had been made with 24 bombers under cover of 9 fighters approaching from Bathurst Island at 26,000 feet on the 25th. Wurtsmith had been able to counter this with 50 Kittyhawks whose pilots claimed 11 enemy aircraft without loss to themselves.

Throughout May the enemy did not attack Darwin but in June they endeavoured to make up for this by a concentrated series of attacks on four consecutive days. Three of these raids were made by 27 bombers with an escort of 18 or 20 fighters. Their main targets were the R.A.A.F. aerodrome and Darwin itself. Considering the weight of the attacks the cost to the defenders was light—16 casualties (4 killed and 12 wounded) on the ground and some damage to installations. The month's air operations showed an enemy loss of 13 aircraft against 9 lost by No. 49 Group. With a good morale and reasonably good facilities, for which Wurtsmith's drive and enthusiasm were largely responsible, a very satisfactory aircraft serviceability rate was achieved. Usually there were 60 Kittyhawks in commission, which meant that Allied fighter pilots were now going into combat knowing that they were not likely to be outnumbered. To this they added the value of experience. After each battle a tactical "autopsy" was held. From these they learned, as the American Volunteer Group and the R.A.F. in China and Burma had learned, that it was futile to engage in individual dog-fights with an enemy whose aircraft could fly faster, climb higher and generally out-manoeuvre their own. They adopted the two-plane element—one covering the other against surprise attack—and used their own advantage in better fire-power and better diving speed in shoot and retreat tactics. Diving into an enemy formation with guns firing, they would strike and continue diving at a speed the Zero could not match. The general build-up of the fighter defence organisation, with

its radar stations, fighter control centre and its American Kittyhawk squadrons, gave the added security which enabled the air commander to reorganise and build up hitting power wtihout grave hindrance.

Reconnaissance showed a substantial concentration of enemy ships at Ambon and nine Hudsons from No. 2 Squadron were assigned to attack them. Led by Squadron Leader McFarlane, eight aircraft took off before dawn on 13th May. Approaching the target area the formation divided into two flights. One flight of five—piloted by McFarlane (leading), Flight Lieutenant Fraser,[4] Flying Officers McCombe, Sharp, and Venn—crossed the Ambon coast to the south-east of the town and, flying just above the hilltops, opened out to sweep low over the bay. The Japanese were surprised. There was no fighter interception and the Hudsons were over their targets before the anti-aircraft batteries opened fire. Each of the five captains selected a different ship, flying in at little more than mast-height to release their loads of four 250-lb general purpose bombs (fused for 11 seconds' delay). As they struck they were followed in by the other three aircraft—piloted by Flight Lieutenant Dalkin (leader), Flying Officer Alcock[5] and Pilot Officer Jaques[6]—who had approached from the east, and each of whom attacked from 1,000 feet with five 250-lb S.A.P. bombs (with one-second delay fuses). The bombs from Venn's aircraft scored a direct hit on a 3,000-ton ship in which there was an immediate explosion. At such low altitude the crew had no chance to escape; caught directly in the blast of the ship's explosion, their aircraft disintegrated. All its crew were killed. The ship appeared to be sinking when the other aircraft left the target area after having scored direct hits on two other vessels of about the same tonnage. A near miss on a 5,000-ton ship was also claimed.[7]

A similar attack was made on 22nd May by eight aircraft drawn from both Nos. 2 and 13 Squadrons. McFarlane again led the attack. On this occasion the Japanese had some warning and the Hudsons were received with a heavy anti-aircraft barrage and by enemy fighters which attacked immediately and shot down two of the Hudsons, one piloted by Flying Officer Brooks[8] of No. 13 Squadron and the other by Pilot Officer Allchin[9] of No. 2 Squadron, who had been unable to remain in formation. The rear-gunner in a Hudson piloted by Sharp shot down one attacking Zero and two others that were hit by fire from the Hudsons' guns broke off combat.

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[4] F-Lt S. J. Fraser, DFC, 524. 7 and 2 Sqns. Stock and share broker; of Melbourne; b. Melbourne, 10 Dec 1914. Killed in car accident 10 Oct 1942.

[5] F-O J. E. Alcock, 408056. 7, 2 and 13 Sqns. Bank clerk; of Launceston, Tas; b. Deloraine, Tas, 30 Jan 1918. Killed in action 1 Oct 1942.

[6] F-Lt G. A. F. Jaques, 260806. 7, 6, 13 Sqns and 65 Sqn USAAF. Articled clerk; of Sydney; b. Sydney, 7 Aug 1921.

[7] The American Joint Army-Navy Assessment Committee did not confirm the sinking of any enemy ships as a result of this attack.

[8] F-O P. G. Brooks, 407219. 7, 6 and 13 Sqns. Bank clerk; of Cootamundra, NSW; b. Adelaide, 26 Aug 1917. Killed in action 22 May 1942.

[9] P-O G. W. Allchin, 401321. 7 and 2 Sqns. Commercial artist; of St Kilda, Vic; b. Ballarat, Vic, 28 Aug 1916. Died while prisoner of war 22 Nov 1942.

About this time welcome aid was given by Flying Fortresses of No. 19 Group at Townsville. Six of these heavy bombers staged through Darwin on 18th May to bomb shipping in Koepang Harbour. The result was not observed. Two days later five Fortresses bombed grounded aircraft and anti-aircraft gun positions at Penfui, leaving several aircraft and fuel dumps burning.

The warning facilities in the Darwin area were now improving. In June three additional R.A.A.F. radio location stations (Nos. 31, 105 and 109) were formed. The Japanese aircraft strength on Timor, Bali and Ambon was now reported to be 57 fighters, 69 bombers and four observation aircraft, with a heavier concentration of aircraft at Kendari, which suggested that the weight of the Allied air attacks was sharply limiting the number of aircraft they were prepared to risk at their forward bases, but later in the month there was a determined effort to reinforce Dili: 50 aircraft and 1,000 troops were reported to have been brought in. Another report stated that 400 troops were moving from Koepang to Atambua in Dutch Timor. On 2nd June when four Hudsons from No. 13 Squadron were over the target at Atambua to discourage such reinforcement, two of them collided. One, piloted by Pilot Officer Gill,[1] crashed and the crew was presumed lost. The pilot of the other Hudson, Flight-Lieutenant Trewren,[2] succeeded in bringing his aircraft back to base although it had been severely damaged. The Fortresses of No. 19 Group again bombed Kendari on 30th June and destroyed a number of grounded aircraft. One of the Fortresses, damaged by anti-aircraft fire, was lost when it crashed only 20 miles from Darwin on its way back.

During June Intelligence reports suggested that the Japanese intended to occupy Tual, on the south of the main island in the Tanimbar Group, and Dobo in the Aru Group. Apart from their proximity to Darwin these bases, and particularly Dobo, were contiguous to Dutch New Guinea where some furtive Japanese activity was reported. The Hudson operations continued throughout July with such variations as four sorties early in the month in support of Sparrow Force which was still fighting its own independent war with great tenacity. Buildings, barracks and shipping at Dili and Atambua were bombed and machine-gunned. Three Fortresses helped on 3rd July by destroying with bombs several aircraft on the ground at Penfui.

On the 25th July the Japanese resumed their raiding of Darwin and made five successive daily attacks with small bomber formations without escort. The damage was slight. No. 49 Group Kittyhawks did not intercept on any of these raids. On the 30th the enemy made two attacks, for the second of which the Kittyhawk pilots were airborne and waiting. Soon after midday 27 bombers and between 15 and 20 fighters struck at Darwin. The American pilots shot down 6 Zeros and 2 bombers and probably

[1] P-O R. L. Gill, 406841. 7 and 13 Sqns. Insurance clerk; of Perth, WA; b. Murray Bridge, SA, 5 Jul 1922. Killed in action 2 Jun 1942.

[2] W Cdr L. R. Trewren, 387. 14 and 13 Sqns. Controller 9 Gp 1943-44; comd RAAF Stn Port Moresby 1945-46. Regular air force offr; of Melbourne; b. Bendigo, Vic, 6 Aug 1913.

destroyed 3 fighters and 3 bombers in addition to damaging 5 other aircraft, but two fuel dumps were destroyed, and power, water and telephone services were disrupted for a time.

Operations in North-Western Area were now entering a new phase: one in which there would be a continuous increase in strength and efficiency both on the ground and in the air, with the accent less on defence and more on offensive operations against any Japanese forces within reach. With the arrival of No. 1 Mobile Works Squadron it became possible to prepare a series of airfields to accommodate new squadrons, particularly of bombers. South from Darwin, airfields were built or extended at Livingstone, Strauss, Sattler, Hughes, Batchelor, Coomalie, Pell, McDonald, Manbulloo, Fenton, Tindal, and Daly Waters. Coastal bases were made or enlarged at Truscott near the Drysdale River Mission, Millingimbi, Groote Eylandt and Gove. The Gove project was originally ordered by Allied Air Headquarters to enable a force of six bomber squadrons to operate over the western approaches to Torres Strait against a possible invasion force using that route. A site was found after much searching and earth-moving equipment was moved in with much difficulty. The project was not finished until the possible need had passed, but the base was extensively used at a later stage of the war.

At or near the north-south chain of airfields the various ancillary units were established. For example, there were repair and salvage units at Manbulloo and Pell, a medical receiving station and stores depot at Daly Waters, a personnel depot at the railhead at Birdum. The men worked long hours day and night to establish these facilities and to improve their living conditions and, as they watched the plan developing, their spirits rose.

R.A.A.F. unit movements in the period included No. 12 Squadron (Wirraways) to Pell; No. 34 Transport Squadron to Hughes; and No. 2 Air Ambulance Unit to Manbulloo.[3]

There was an interlude late in July that brought consciousness of the war in the air more sharply into focus for the Australian people. On the night of the 25th-26th at 11.35 p.m. Townsville had its first air raid warning. At 12.40 a.m. three Kawanisi flying-boats made a nuisance raid over the town, now the most important Allied air base in Australia. The enemy aircraft dropped six bombs over the harbour, all of them falling into the sea several hundred yards from the wharf area. Searchlights picked out the flying-boats, but there was no attempt at fighter interception. Again, at 2.25 a.m. on the 28th, a single enemy flying-boat jettisoned a stick of eight bombs harmlessly in the foothills of the Many Peaks Range outside the town, drawing 72 rounds of fire from the defenders' anti-aircraft guns. Six Airacobras unsuccessfully attempted interception. Townsville had its third raid at 2.27 a.m. on the 29th when, once more,

[3] American Air Force units serving in the area were now: No. 49 Fighter Group (Nos. 7, 8 and 9 Squadrons), No. 49 Interceptor Control Squadron and the ground echelons of Nos. 71 and 64 Bombardment Squadrons.



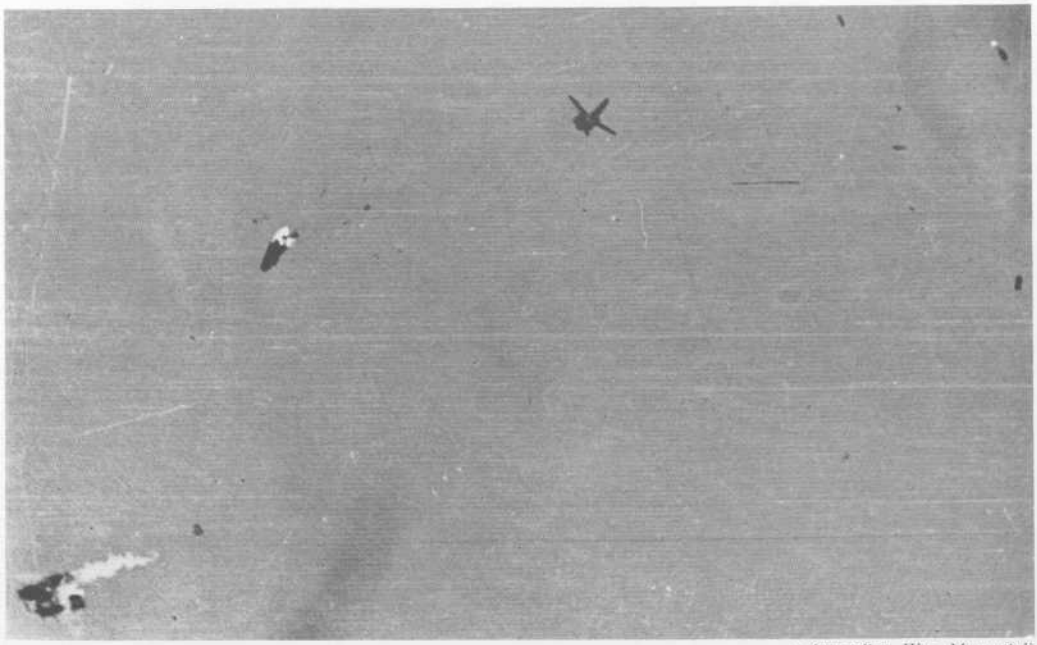
(Allied Air Forces, S.W.P.A.)

An aerial photograph of the country between Oivi and Myola. The rough terrain and unstable air conditions presented hazards for low flying, and the thickness and sameness of the vegetation made difficult the task of bombing and strafing enemy positions and dropping supplies to the forward troops.



(*Australian War Memorial*)

A Wirraway of No. 4 Tactical Reconnaissance Squadron diving to strafe tree-tops in which Japanese snipers were concealed during the fighting in the Buna-Gona area.



(*Australian War Memorial*)

One of three Bostons of No. 22 Squadron lost over the target area in Papua between the 11th and 29th November 1942. The loss of the aircraft was caused by the release of the bomb-load—clusters of 20-lb fragmentation bombs. On leaving the bomb bay the first bombs would be flicked back against the fuselage by the slipstream and would explode. This would set off the remainder of the load causing a shattering explosion. The aircraft shown above was attacking Buna strip on 26th November.

a single four-engined flying-boat appeared. It released seven bombs, six of which went harmlessly into the sea and the seventh exploded close to the racecourse without causing more damage than a few broken windows. On this occasion four American Airacobra pilots attempted to intercept and one closed with the enemy aircraft sufficiently to open fire on it. Though the fire from one of the fighters appeared to hit the flying-boat, it escaped apparently without any serious damage and the operator of No. 1 Wireless Unit at Townsville later heard the flying-boat's crew calling Rabaul and asking for a flare-path on the harbour.

The enemy's raids in this area ended on the night of 31st July when another single aircraft flew over the Mossman district near Cairns and dropped a single bomb which exploded 20 yards from a house and injured a child—the first civilian air-raid casualty on the east coast of Australia. While these raids caused a certain amount of movement by civilians away from the "danger area", on the other hand they had a rather stimulating effect; servicemen, and women and civilians, most of whom remained in the city, gained a sense of having a more personal share in the war effort.

Side by side with G.H.Q's efforts to advance the claims of S.W.P.A. to more aircraft, there was the independent and smaller, though no less vigorous, effort of the Australian Government. In May Mr Curtin was strongly advocating, both to Washington and London, the allocation of a sufficient share of the available aircraft to enable the R.A.A.F. to meet its current establishments and its planned expansion. To this end he sent the Attorney-General and Minister for External Affairs, Dr Evatt, as his special emissary to the United States and the United Kingdom. In Washington Dr Evatt gained an attentive hearing and an allocation of additional aircraft.[4]

In London later Dr Evatt took his plea direct to Mr Churchill. It was a double plea: he sought Spitfires for the R.A.A.F. and an aircraft carrier for, or to serve with, the R.A.N. At Mr Churchill's invitation Dr Evatt accompanied him on a four-days tour of northern England and with him addressed a public meeting at Leeds, where references to Australia caused a demonstration of great warmth. Dr Evatt explained that it was soon after this demonstration that Mr Churchill decided that three fully-equipped Spitfire fighter squadrons should be sent to Australia. This decision, which was kept a close secret for some months, was made as a "special contribution" to Australia.[5]

With his plea for an aircraft carrier Dr Evatt, despite Mr Churchill's sympathetic consideration, was not successful. Mr Churchill's interest in the request was expressed in a minute dated 17th May which he directed to the First Lord of the Admiralty and the First Sea Lord, saying:

> Dr Evatt has made me the strongest appeals about an aircraft carrier. We had, of course, promised them *Hermes,* but she was sunk on our business before being

[4] At the end of May aircraft ordered from the United States but not yet delivered included: 92 Catalinas, 689 Kittyhawks, 370 Vultee Vengeances, 143 Fortresses, and some transports.

[5] The details of this contribution were first made known to the Australian public on 4th March 1943 in statements to Parliament by Mr Curtin and Dr Evatt. Two of the squadrons were RAAF, EATS units—Nos. 452 and 457—and the third a RAF squadron (No. 54).

sent to them. You now tell me that they said they did not want her. Have you seen, however, the long telegram which Dr Evatt has received from Mr Curtin, in which the need of two aircraft carriers is stressed? I carefully avoided making the slightest promise but I have been wondering whether the *Furious* could be spared. Will you let me know what are your plans for her? . . . I recognise the fact that the Americans have withdrawn *Wasp* (from the Atlantic) and that this makes our position more difficult, and of course *Wasp* is a reinforcement for the Pacific. We have to consider our permanent relationship with Australia and it seems very detrimental to the future of the Empire for us not to be represented in any way in her defence.[6]

But the Admiralty could not meet the British Prime Minister's wishes —a carrier could not be spared.

While Port Moresby was and had to remain the key New Guinea base for the Allied forces, G.H.Q. were well aware of the need of a base on or near the south-eastern extremity of the island. Its purpose would be to command strategically the island-studded Solomon Sea, shorten the flight range to the Solomons and New Britain targets (while avoiding the need to cross the Owen Stanleys), provide a harbour base for seaborne operations up the northern coast of New Guinea, and particularly to deny to the enemy the obvious advantages they would gain from establishing a base of their own in this part of New Guinea. At the beginning of June a survey party was sent to this area to select a site for the base. They found their task difficult; much of the low-lying jungle terrain on the coast was criss-crossed with waterways denying suitable runway sites and the island's mountain spine reached uncomfortably far down to the sea. The first site proposed was at Mullins Harbour on the south side of the "tip of the tail", but further survey showed a better place at the head of Milne Bay which bifurcates the tip itself. Here there was a deep and well-sheltered anchorage with sufficient flat land adjacent. An area of 1,600 acres of this land, won from the jungle by coconut planters, was known as Gili Gili.

The survey completed, orders were given for the immediate construction of the base, in the plan for which provision had been made for three runways. American engineer troops began disembarking at Milne Bay on 29th June and soon the 7th Australian Brigade group was established there. With an annual rainfall of about 106 inches the low-lying land was frequently boggy and heavy transport was almost useless until roads had been formed. The humidity was extreme and malaria-carrying mosquitoes abounded. At frequent intervals the cloud base came down so low that the area was completely closed in. In spite of the difficulties the work went on. The first R.A.A.F. parties arrived in the transport *Swartenhondt.* Among them were the installation section of No. 37 Radar Station, in charge of a R.A.F. officer, Flight Lieutenant Day[7] and a signals installation

[6] W. S. Churchill, *The Second World War,* Vol IV, p. 770.

[7] F-Lt G. A. Day, 89592, RAF. 548 Sqn RAF; Instructor 1 and 8 EFTS's 1942-43, 57 OTU 1943-44. Flying instructor; of Hitchin, Hertfordshire, Eng; b. Hitchin, 15 Dec 1915.

party under Pilot Officer Knife.[8] Within a few days the signals unit, having battled with the ill-effects of rain and humidity, was in partial operation—partial because security forbade transmission at this stage. The siting of the radar station had its special problems; materials were limited and members of the unit had to go to Samarai on "scrounging" expeditions before the station was finally erected.

Poor communications in the S.W.P.A. placed a serious restriction on the receipt of Intelligence information and G.H.Q. therefore made extremely heavy demands on the Allied Air Forces for long-range reconnaissance of the enemy bases. This had the effect of draining the striking power of the Flying Fortress units—the only heavy bombers the A.A.F. possessed. An entire squadron, No. 435, was now completely employed on these operations, though their sorties were made on armed reconnaissance and attacks were made when opportunity offered. For the same reason there was a heavy drain on the "strike" capacity of No. 3 Group's Mitchells, particularly during the Coral Sea battle. In May the crews of these aircraft flew 120 photo-reconnaissance sorties.

So heavy was the burden of No. 435 Squadron that a flight of 4 aircraft and 8 crews was detached to Port Moresby to permit the extension of their reconnaissance sorties to 4 instead of 2 a day. A notable addition to the photo-reconnaissance strength was made in April when a flight of No. 8 Photo Squadron, commanded by Major Karl Polifka, arrived from the United States. An expert in this field, Polifka undertook a systematic mapping program operating with special cameras mounted in a modified Lockheed Lightning fighter, the first of these twin-fuselage aircraft to arrive in the South-West Pacific. Stripped of its guns and all unneeded weight the Lightning gained altitude, speed and range; on these the pilot had to rely. Almost single-handed Polifka covered a large part of eastern New Guinea and New Britain. In June the remaining two flights of the squadron arrived to share this valuable service.

The Japanese, meanwhile, had satisfied their need of staging points along the New Guinea coast of Vitiaz Strait, the seaway between New Guinea and New Britain. On 10th March they had seized Finschhafen at the southern end of the strait near Cape Cretin. Then followed the occupation on 30th April of Alexishafen at the northern end of the strait, and of Madang next day. On 6th May the enemy took possession of Hollandia in Dutch New Guinea.

If the Japanese command needed bases on the north coast of New Guinea so too did MacArthur, and one of Polifka's most important tasks at this stage was to survey the coastal area between Oro Bay and Cape Ward Hunt for suitable sites. The choice was an area in the vicinity of Buna where there was a Government station; there was also a mission at Gona, 12 miles to the west. It was low-lying country at the mouth of the

[8] F-Lt C. E. Knife, 265120. North-Eastern Area HQ Det. Milne Bay; SSO North-Western, Eastern and Southern Area HQs; 12 and 11 Sigs Units, 1st TAF. Sales manager; of Sydney; b. London, 17 Jul 1904.

Giruwa River—coconut plantations and expanses of kunai grass flats flanked by swampy land drained into the sea by several streams.

In a memorandum dated 15th July the Supreme Commander outlined his plan—code-named PROVIDENCE—for the establishment of the new base. D-day for this operation was to be between 10th and 12th August. A lightly-equipped army force—a company of the 39th Battalion—moved from Port Moresby over a tortuous jungle trail leading north-east over the Owen Stanley Mountains. It was to go to Buna, there to be joined by a naval force that would move up the coast in light vessels from Milne Bay. Together these troops would prepare for the arrival of a larger occupation force. Anti-aircraft guns would be mounted and the whole operation would be given fighter protection by the squadrons based on Port Moresby. The immediate purpose of PROVIDENCE was to provide facilities for 2 fighter squadrons and eventually for 3 interceptor fighter and one long-range fighter squadrons with advanced base facilities for 2 heavy-bomber squadrons.

Early on the morning of 19th July a Flying Fortress crew on reconnaissance reported an enemy seagoing force in the vicinity of Rabaul. Next day the Japanese struck at Port Moresby with a force of 26 bombers and 15 fighters. In the afternoon of the 21st an enemy float-plane reconnoitred and strafed the Buna foreshore and a naval bombardment followed. The convoy sighted near Rabaul on the 19th was now off the coast near Buna, and was reported to comprise one cruiser, 2 destroyers, 2 transports and small craft. Late in the afternoon one Fortress and 5 Marauders struck at the enemy ships, the Marauders bombing from about 6,000 feet. One direct hit on a transport was observed. Another formation of 5 Marauders followed, but it was then too dark for them to find the ships. Under cover of night the Japanese put a force ashore at Gona without opposition. Early next morning American bombers and fighters struck again. The enemy had no fighter cover but the guns of their warships kept 10 Fortresses at more than 25,000 feet and their bombs fell harmlessly. Five Mitchells and 6 Marauders also attacked and failed to hit the ships, but the crew of a single Marauder later claimed a direct hit, and a Fortress crew who attacked from much lower altitude than the other heavy bombers claimed two direct hits on a transport. Airacobra pilots who had given unneeded cover to the bombers raked the enemy landing barges and supply dumps on the beach-head with gunfire, killing, they believed, a number of enemy troops. The only R.A.A.F. crew to take part in these attacks was one from No. 32 Squadron captained by Flight Lieutenant Manning whose bombs fell just short of the target.

By 11 a.m. on the 22nd the Japanese ships, with the exception of one transport that had been sunk by the bombers, were steaming northward after having landed a substantial body of troops and their equipment.[9]

[9] The sinking of this transport was confirmed. She was the *Ayatosan Maru*.
The composition of the force put ashore was later shown to be the *I Bn*, of the *144th Regt*, most of the *15th Independent Engineer Regiment*, detachments of the *55th Mountain Arty* and *47th Field AA Arty*, a company of the *5th Sasebo Naval Landing Force* totalling 2,000 men, 100 Formosans of the *15th Naval Pioneer Unit*, 1,200 conscripted Rabaul natives, and 52 horses.

American medium-bomber crews and Airacobra pilots were back over the beach-head during the day, bombing and strafing shore targets and small craft still in Buna Bay and on the following day two R.A.A.F. Catalinas captained by Squadron Leader Chapman and Flying Officer Higgins, began a series of harassing raids which Nos. 11 and 20 Squadrons maintained until the end of the month, the crews spending as long as five hours over the target, two aircraft between them dropping 7,736 pounds of "daisy cutter", general purpose, and incendiary bombs from about 2,000 feet in day and night attacks.

On 30th July a No. 32 Squadron Hudson crew captained by Manning made that unit's last combat sortie in New Guinea when they attacked enemy positions in the Buna area. In this period the Hudson crews had been busy dropping supplies to Kanga Force and to the troops now engaged in the grim task of countering the enemy's advance patrols who already were pressing along the track that led to Port Moresby. These supply-dropping sorties, in which the aircraft were dubbed "bully-beef bombers" and "biscuit bombers" by the men of the army, were the beginning of an extremely hazardous and exhausting series of operations that were to be continued by a variety of Allied transport aircraft for months to come. Within a week of their landing in the Buna area the fresh Japanese troops, suitably equipped for rapid movement in the jungle, were threatening Kokoda and by the 29th, they had forced "Maroubra Force" back and taken Kokoda.

In the days preceding the Japanese occupation of Kokoda, aircraft from the American transport squadron, aided by Hudsons of No. 32, were landing vital supplies on the small airstrip that served that base. Their crews scarcely knew from day to day which force held it—the Australian or the Japanese.[1] Two days after Kokoda fell the enemy air units delivered their 77th attack on Port Moresby.

On 25th and 29th July more enemy transports were reported to be headed south from Rabaul. Attacks were made on the convoy by Fortresses (which on this occasion bombed from 2,000 feet, and claimed direct hits on one transport) supported by R.A.A.F. Hudsons and Catalinas and, as the ships came nearer the New Guinea coast, by American Dauntless dive bombers. None of these attacks held the enemy force in check; reinforcements were landed at Buna without serious hindrance. The operation was ill-fated for the Dauntless crews. Seven aircraft crossed the Owen Stanleys on the 29th to strike at the convoy, now close in-shore. On this occasion the enemy had strong fighter cover. The dive bombers' own fighter cover, apparently unable to stay with their much slower charges, had become separated from them at the crucial time. The Zero pilots struck and five of the Dauntless aircraft went crashing into the jungle or the sea. One, riddled by gunfire, was nursed by its pilot until it

[1] By 21st July No. 21 Troop Carrier Squadron had been reinforced by No. 22 Squadron. These units were listed at that date as having 32 aircraft but the record is confused and it seems probable that this total included No. 32 Squadron's Hudsons then still engaged in supply-dropping.

reached Milne Bay and only one returned to Port Moresby unharmed. From that time on the role of the Dauntless was strictly non-combatant.

Failure on the part of the A.A.F. to prevent the two enemy forces from reaching Buna reflected unfavourably on General Brett, who, as commander, was obliged to accept both the responsibility and the criticism entailed. Clearly there was dissatisfaction over the results of the Allied air attacks. Not only had the Japanese succeeded in landing their force but they had done so at the very site chosen for MacArthur's base. As G.H.Q. saw it, the evidence weighed heavily against the air commander. Intelligence officers at G.H.Q. had indicated, as early as 23rd May, that Buna was an enemy objective, and they had predicted an attempt by the Japanese to land there on or about 16th July. The enemy convoy had been sighted ten hours before the landing took place, yet, G.H.Q. asserted, "we were able to deliver only five B-26's at the decisive point".[2] Whatever influences this criticism may have exerted, it had been clear to those close to the two commanders that Brett had never held the full confidence of the Supreme Commander.

Though his period of command under General MacArthur had been comparatively brief Brett had faced many difficulties, not the least among which was the awkward relationship that had existed between himself and the Supreme Commander. His own expression of this awkwardness, publicly stated after the war, and the record of events concerning the relationship, leave the impression that the two men were professionally and personally incompatible. Brett recorded that General Patrick Hurley, a former United States Secretary for War and, for a brief period, an officer on his staff, after meeting MacArthur on his arrival in Australia, told Brett privately that the new commander was antagonistic to him. Hurley had said that he could not suggest the cause. This was borne out, Brett indicated, when MacArthur, on leaving his train at Melbourne to assume his new role as Supreme Commander, appeared to snub him—the man who until then had been the senior commander in the South-West Pacific. Brett's record of the occasion states that, in response to an inquiry as to whether he wished to be accompanied to his hotel, MacArthur had answered with a brief "No" and had driven off. Later, when Brett and Royce called formally on MacArthur, they were not admitted. "We left our cards," Brett wrote, adding that Royce had remarked, "You'd think we were orderlies. Or don't we belong to the right fraternity?"

> Royce (Brett wrote) put his finger on it right there. We didn't belong. No one belonged except those who had been with MacArthur in the Philippines. . . . MacArthur's staff officers reflected his attitudes. If they did not they were not with him very long.

Brett noted that it was not until eight days after MacArthur's arrival in Melbourne that the Supreme Commander consented to see him. When he did he found MacArthur pacing the floor. "As he talked he walked back and forth," Brett stated, "his nervous energy driving him into continual

[2] Craven and Cate, Vol IV, p. 25.

motion.[3] . . . MacArthur went into a dissertation on the air forces. It was evident that he had nothing but contempt and criticism for them. 'They lack discipline, organisation, purposeful intent,' he said." In Brett's assessment the key to this reaction was that the Philippines campaign had been lost; though "through no fault of his". "Defeat raked his spirit raw. Besides he was abnormally sensitive to criticism. The Supreme Commander was depressed and unhappy over having left his men in Bataan and Corregidor."

The interview ended on a friendly note. MacArthur applauded Brett's wish to go immediately to Townsville, there to assume command of the Allied Air Forces, and warmly wished him good luck.

But (wrote Brett) it didn't work out quite that way. General MacArthur did not have a full appreciation of air operations nor did he have an officer on his (immediate) staff sufficiently conversant with such operations to execute proper planning. Since he was prone to make all decisions himself, depending only on his immediate staff . . . commanders were not conferred with prior to . . . decisions. Lack of command and staff meetings resulted in directives difficult to interpret. Orders were issued without discussing them with those who had to carry them through and who, presumably, had the most specialized knowledge of the subject. I found it hard to tie in orders which were issued and found the same reaction from Admiral Leary and Australian General Blamey.[4]

There is no record available to indicate specifically MacArthur's attitude to Brett in the light of the criticism that followed the Japanese landing at Buna. But that is of no consequence for already he had been in communication with the War Department on the subject of his air command and, as early as 7th July, action had been taken to provide a replacement for Brett. From a list of possible candidates submitted to him by the War Department, he had chosen Major-General George C. Kenney, an officer with an impressive record both of promotion and achievement. The succeeding action was prompt. Kenney reached Australia on 28th July. A week later he assumed command of the Allied Air Forces, South-West Pacific Area.

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[3] Australians serving at General MacArthur's headquarters came to know his dramatic floor-pacing habit. It was seen in its most impressive form perhaps at his rare and notable press conferences. At one such conference at GHQ Brisbane late in 1943, the 30 or more war correspondents and officers present rose as the general made an impressive entry—bare-headed, grave, distinguished-looking, immaculate. His right arm was raised in salute. There was no other introduction. Pacing to and fro almost the length of the conference room, MacArthur immediately began to declaim his statement of the military situation. His phrasing was perfect, his speech clear and unhalting, except for pauses for dramatic emphasis; the correspondents took notes but there was no interruption of any kind. The conference room had become a stage, MacArthur the virtuoso, the other officers the "extras" in the cast, and the correspondents the audience. It was a dramatic occasion. The statement ended, the general again raised his right arm in salute and strode from the room followed by one or two staff officers. The conference was over. One man alone had spoken—the Supreme Commander. There was no questioning, no opportunity to clarify the meaning of the statement. It had come direct from the lips of General Douglas MacArthur, and as such it was, evidently, beyond question.

[4] Lt-Gen George H. Brett (with Jack Kofoed), "The MacArthur I Knew" (*True*, Oct 1947).

CHAPTER 28

PROBLEMS OF COMMAND

FROM the moment he learned of his appointment as Commanding General, Allied Air Forces, South-West Pacific Area, General Kenney must have had few illusions about his new task. He was wished good luck at Washington with the comment that "from reports coming out of that theatre" he would need it. From General Arnold and General Marshall his only instructions were, "Simply report to General MacArthur." Of this meeting with his two chiefs he has written, "I was told that there were about 600 aircraft out there and that should be enough to fight a pretty good war with. Anyhow, while they would do what they could to help me out, they just had to build up the European show first."[1] On the day that he left the United States for Australia the Japanese established their Gona-Buna beach-head. He learned of this at Hickam Field, Hawaii.

Kenney flew to Brisbane where General Headquarters, S.W.P.A., and Allied Air Forces Headquarters had now been established, having moved from Melbourne on 20th July and thus sited themselves 800 miles nearer the scene of actual operations.[2] Here he found first that, to use his own crisp phraseology, "Brett certainly was in wrong. Nothing that he did was right." This he heard from MacArthur's chief of staff, General Sutherland, whom he described as "a brilliant, hard-working officer [who] had always rubbed people the wrong way", adding, "He was egotistic, like most people, but an unfortunate bit of arrogance combined with his egotism had made him almost universally disliked." According to Sutherland ". . . none of Brett's staff or senior commanders was any good, the pilots couldn't hit anything, and knew nothing about proper maintenance of their equipment or how to handle their supplies. He also thought there was some question about the kids having much stomach for fighting. He thought the Australians were about as undisciplined, untrained, over-advertised and generally useless as the Air Force." To this diatribe Kenney added his own comment, "In fact I heard just about everyone hauled over the coals except Douglas MacArthur and Richard K. Sutherland."

From MacArthur himself Kenney also heard all about the shortcomings of the air force "until finally there was nothing left but an inefficient rabble of boulevard shock troops whose contribution to the war effort was practically nil. . . . He had no use for anyone in the whole organisation from Brett down to and including the rank of colonel. . . . Finally he expressed the opinion that the air personnel had gone beyond just being antagonistic to his headquarters, to the point of disloyalty."

[1] G. C. Kenney, *General Kenney Reports* (1949), p. 11. This memoir is the source also for the subsequent quotations describing his reactions on taking over his new command.

[2] A rear echelon of AAFHQ had been left in Melbourne with responsibility for personnel and supply. Another change at this time had been the disbanding of USAFIA for which United States Army Services of Supply (USASOS) was substituted.

From his own account of the interview it seems that Kenney made no attempt to counter this demonstration of how the old and bitter Service rivalry could lead to such intense prejudices. He had the psychological advantage of succeeding an officer who in MacArthur's eyes had completely lost face; almost any newcomer would probably have offered welcome relief to the Supreme Commander. Himself an egotist, Kenney was content with a clear-cut statement in which the first person singular received heavy emphasis.

> I told him (he has written) that as long as he had had enough confidence in me to ask for me to be sent out here to run his air show for him, I intended to do that very thing. I knew how to run an air force as well or better than anyone else and, while there was undoubtedly a lot of things wrong with his show, I intended to correct them and do a real job . . . the Air Force . . . from now on . . . would produce results.[8]

Stockily built, dynamic and decisive, Kenney had the robust confidence of a man thoroughly trained in his profession, and a habit of assessing both people and situations quickly—sometimes too quickly. To him hard-working officers with imagination were not only good officers, they were friends, though discipline was not forgotten. Nova Scotia-born, he had enlisted as a flying cadet in the war of 1914-18, gained the rank of lieutenant, flown 75 missions, shot down two German aircraft and been shot down once himself. Between the two world wars he had displayed a passion and a capacity for aeronautical development in the military field. He invented the parachute fragmentation bomb and, as long ago as 1922, had initiated the installation of machine-guns in the wings of an aircraft.[9] Between 1939 and 1942 he had been successively an Air Corps observer with the American Navy in the Caribbean, an air attaché at the American embassy in Paris, commanding officer of the Air Corps experimental division and engineering school, and, most recently, commanding officer of the Fourth Air Force. At the age of 52 he was now at the peak of his career. He was eager and quite unafraid of the difficulties that faced him.

Despite MacArthur's pessimism about the quality of the Allied Air Forces staff officers, Kenney found some excellent material to draw on. Notable newcomers were two brigadier-generals, Ennis C. Whitehead and Kenneth Walker, both of whom he knew to be highly competent. Brett had sent both these officers to Darwin to become familiar with the situation there before paying a similar visit to New Guinea.

Kenney's first contact with the R.A.A.F's senior staff was with Air Vice-Marshal Bostock, Brett's chief of staff. The two men had much the same keen operational competence, the same quality of thrust, the same effectively blunt way of approaching their objectives. Kenney wrote, "He looked gruff and tough and was very anti-G.H.Q. like all the air crowd I'd talked to so far, but he impressed me as being honest and I

[8] Kenney, p. 29.

[9] Just before leaving the United States for Australia Kenney had learned that 3,000 parachute fragmentation bombs were in war reserve. "No one else wanted them," he has written, "so they were ordered shipped to Australia on the next boat."—Kenney, p. 12.

believed that, if he would work with me at all, he would be loyal to me."[1] Bostock proved that he was ready to do both.

Soon after this Kenney met Group Captain Garing who impressed him as an officer who was "active, intelligent, knew the theatre and had ideas about how to fight the Japs".[2] He questioned Garing about possible sites for landing fields on the north coast of New Guinea and was deeply interested when Garing told him of a good natural landing field at Wanigela Mission about midway between Milne Bay and Buna. The site had been found by the crew of a R.A.A.F. reconnaissance Hudson who had made a forced landing there on 15th June. After natives had cut a runway in the tall kunai grass a second Hudson had flown in and, when the first aircraft had been repaired, both successfully took off and flew back to Port Moresby. This greatly interested Kenney as a "possibility for the future".

Within two days of his arrival the new commander was in New Guinea. Accompanied by Brigadier-General Scanlon, then commanding the air force elements on the islands, and Whitehead, he made a searching inspection of the units there. Whitehead, an experienced fighter commander, a wiry man of few words but with a prodigious capacity for work, he promptly chose as successor to Scanlon, whom he respected but judged to be miscast as an operational commander. Walker, keen, experienced, an expert in bombardment operations, was his logical choice as leader of the bomber command, the formation of which Kenney was contemplating.

While this inspection of the command scene was going on, a new air organisation pattern for the S.W.P.A. was being worked out in Washington. Kenney had been briefed on this before he left and knew that the Operations Division of the War Department's general staff was preparing the organisation for a distinct American air force that "would be largely free from the immediate defence of Australia, in order to concentrate on the support of a rapidly moving offensive to the north".[3] This optimistic planning signified the intention to end the Allied Air Forces organisation, a course in keeping with the weight and prestige of the U.S.A.A.F. and one that would dispose of the somewhat irritating situation caused by the R.A.A.F. having over-much say in American operations and administration. This planning also bore some relation to the origin of what later became known in Australia as the "Brisbane Line" controversy. The phrase "a rapidly moving offensive to the north" supports a misconception of the time that from the day of his arrival, MacArthur had sought to dispose his forces for the conduct of an offensive campaign. This suggestion the Supreme Commander himself developed later in a retrospective survey, the gist of which was made public. In doing this MacArthur stimulated a quite unjust implication that when he arrived in Australia he found that the Australian General Staff had a "largely defeatest concep-

[1] Kenney, p. 33.

[2] Kenney, p. 41.

[3] Craven and Cate, *The Army Air Forces in World War II*, Vol IV, p. 98.

tion" in that they had accepted as inevitable the conclusion that northern Queensland and the Darwin area would be overrun by the Japanese and accordingly had drawn up a plan for a defence line approximating to the Tropic of Capricorn, later captiously known as "the Brisbane Line". The role of the Port Moresby garrison was said to have been merely "to hold the enemy to enable mainland defences to be brought into action".[4] Thus it was clearly implied that MacArthur had refused to subscribe to any such "largely defeatist conception" and had immediately changed this to a defensive plan. The relevant operations instructions of the time disclose without question that while the Australian General Staff's plan was inevitably a defensive one because of the weakness of the forces at their disposal, MacArthur, on arrival, had adopted virtually the same plan. This was indicated by his first relevant directive.[5] This ordered that the

> Allied Land Forces S.W.P.A. will prevent any landing on the north-east coast of Australia or on the south-western coast of New Guinea. . . . Allied Air Forces will hold available a striking force of bombardment aviation in north-east Australia, centered in the general area of Townsville, to attack targets of opportunity with especial emphasis on the interception of carriers which might be directed against the north-east coast or troop convoys directed towards Port Moresby. . . . The Allied Land Commander responsible for the areas in the vicinity of Port Moresby and along the north-east coast of Australia to include Brisbane will immediately perfect plans for the co-ordination of all the defensive forces in their respective areas.[6]

This constituted an entirely defensive role. But there was no question that it was MacArthur's clear intention to take the offensive as soon as the reorganisation and replenishment of his forces would allow. With the air force planning taking place in Washington in August he was in full sympathy. On 7th August, only three days after Kenney's arrival, he communicated with Washington requesting authority for the formation of an American air force which, he suggested, should be designated the Fifth Air Force in honour of the fighter and bomber commands that had served him in the Philippines.

Kenney soon found cause for concern in operational procedures; as he expressed it, "the set-up was chaotic". Heavy-bomber strikes were assigned from Brisbane, relayed to Townsville, the orders passed on to No. 19 Group who were by this time based at Mareeba, about 250 miles farther north, and who sent what combat-worthy aircraft they had to Port Moresby where the crews got their final briefing. There seemed to be no formation leader, and the aircraft might or might not get together

[4] This implication received wide publicity as a consequence of a press interview given by MacArthur on 18th March 1943, the anniversary of his arrival in Australia. The newspaper references took the form of a third person statement, one rendering of which began: "So much has changed in the intervening 12 months that it can now be revealed that this time a year ago, when General MacArthur first came to Australia, the defence plan for the safety of this continent involved north Australia being taken by the enemy. . . ."

[5] GHQ SWPA Operations Instruction No. 2 of 25th April 1942.

[6] Additionally AAF was to maintain a close reconnaissance of seven areas, extending from Cape Valsch in west New Guinea to the New Hebrides and New Caledonia in the east, with special surveillance of the east New Guinea-New Britain-Solomons area. The Allied Naval Forces were also to maintain reconnaissance, both aerial and surface, cooperate with naval forces in SPA and make submarine attacks on enemy forces in the areas of Port Moresby, Samarai, Rabaul and the Louisiade Archipelago.

on the way to the target. Usually 7 to 9 bombers came from Mareeba, 6 might get off on the raid and from one to 3 usually arrived at the target. If enemy aircraft were encountered all bombs and auxiliary fuel were jettisoned and the mission abandoned. "The crews," Kenney wrote, were "obsessed with the idea that a single bullet would detonate the bombs and blow up the whole works." No one had explained to "the kids" that the bombs were not as sensitive as that. At a briefing at the Seven-Mile aerodrome—always done by Australian officers—he had to relieve the apprehension of some of the aircrew who were worrying because they had no de-icing equipment on their aircraft. The Australian "weather man", he said, had referred to "rine clouds" and he had to explain that in the Australian accent "rain" became "rine". The pilots thought the reference had been to "rime clouds". The general found, too, that the fighter group at Port Moresby "sat around waiting for the Japs to come over", seldom getting off in time to intercept because the warning they received was rarely more than five minutes.[8]

Having inspected the key operational area Kenney examined the heavy bombers' mainland base at Mareeba and the supply organisation (or lack of it) that lay immediately behind it. He found No. 19 Group's situation "appalling". So many Fortresses were out of commission for lack of engines and tail wheels that, had he then called for immediate action, the group could not have put more than four aircraft into the air. Requisitions for supplies and spare parts went from the group to Royce's headquarters at Townsville, then to an advance air depot at Charters Towers, then to Melbourne and from there on to the main air force depot at Tocumwal, over 100 miles north of Melbourne. On an average about a month passed before the requisition was returned to the group, generally with the notation "Not available" or "Improperly filled out". The commander called for a statement of aircraft strength. When this was brought to him several days later by Group Captain Walters, Director of Operations at A.A.F. H.Q., it appeared reasonably encouraging at first sight, but when the qualifications set against the strength in each type were applied, it became a statement of weakness not strength, as the accompanying table shows.

OPERATIONAL AIRCRAFT, U.S.A.A.F.

On Strength	*Serviceable*
245 fighters—170 for overhaul or salvage	75
53 light bombers—none ready for combat	—
70 medium bombers—37 unserviceable or lacking equipment	33
62 heavy bombers—19 under overhaul or rebuilding	43
51 miscellaneous—none fit for combat	—
481 (*a*)	151

(*a*) Total excludes 36 transport aircraft of 19 different types, fewer than half of which were in commission.

[8] Kenney, p. 36.

R.A.A.F.[9]

On Strength		*Serviceable*
73 Hudsons	— 21 unserviceable	52
15 Beauforts	— 6 unserviceable	9
(*x*) 27 Beaufighters	— 9 unserviceable	18
69 Kittyhawks	— 11 unserviceable	58
(*x*) 17 Bostons	— 10 unserviceable	7
7 Airacobras	— 6 unserviceable	1
7 Catalinas	— 3 unserviceable	4
215		149

(*x*) Just coming into operation.

To MacArthur, Kenney reported that he wanted to make it his primary purpose to "own" the air over New Guinea. But he had another and even more immediate, though related, task, one for which he needed the heaviest bomber strength he could command. With typical directness he set about countering as best he could the poor state of his bomber squadrons and the even poorer state of the maintenance and overhaul organisation behind them. He instructed Colonel Carmichael, commander of No. 19 Group, to cancel all flying and get every Flying Fortress possible into commission for a maximum effort a week later. He obtained MacArthur's authority to send back to the United States any officer he regarded as "dead wood" and he acted on it promptly. He ordered officers in charge of servicing facilities to forget the "paper work" and get the equipment and spares moving. He forbade the breaking-up of damaged aircraft; they were to be rebuilt even if there was "nothing left but a tail wheel to start with". On all sides he emphasised the time factor.

The more immediate task in which MacArthur and Kenney were preoccupied related, of course, to the three-phase campaign outlined in the Joint Chiefs of Staff directive of 2nd July. This plan had been amended because the Japanese had, as noted, begun the construction of an airfield on Guadalcanal. From this airfield Japanese air units would gravely threaten the Allied bases in the New Hebrides and New Caledonia. Phase 1 of the Washington directive was therefore changed and Admiral Ghormley was ordered to capture Guadalcanal and Tulagi instead of occupying Tulagi and Santa Cruz. The task was to be undertaken by the 1st Marine Division and, as in the earlier plan, MacArthur's command was to lend what air and naval support it could. His aircraft would reconnoitre and if necessary attack in the area west of 158th degree of longitude and make an attack on Rabaul on D-day in sufficient strength, it was hoped, to "put down" and "keep down" the main Japanese air striking force. To

[9] As at 10 August 1942. Additionally 6 Mitchells were assigned to No. 18 NEI Sqn recently formed at Canberra. The aircraft state record for this date includes 62 Wirraways (33 unserviceable) and 7 transport aircraft—3 Empire flying-boats (1 unserviceable), and 4 DC-2s (1 unserviceable)—plus a variety of light aircraft for communications etc. There were also the OTU and SFTS aircraft listed as "second line" operational aircraft—Ansons, Fairey Battles etc. These had very limited, if any, combat value except for the Wirraways which were later to be given an important army cooperation role. General Kenney records of the RAAF's combat aircraft that "two fighter squadrons in New Guinea had a total of 40 planes and four reconnaissance squadrons had a total of 30 aircraft."—Kenney, p. 61.

this end Kenney worked, and since the date set for the Guadalcanal landing was 7th August there was no time to lose; he wanted the maximum number of Flying Fortresses over Vunakanau aerodrome at the critical time. The Mitchells and Marauders would concentrate their bombs on Lae and Salamaua. All other suitable aircraft would be used to support the Australian force fighting on the Kokoda Trail. To this MacArthur said "Go ahead!" adding that if Kenney could carry out his plan to put 16 or 18 Fortresses over Rabaul in one strike it would be the heaviest single Allied air attack in the Pacific war to date. An air reconnaissance over Rabaul on the 4th had shown a concentration of about 150 Japanese aircraft on Vunakanau—an increase of almost 100 in the last two days. The thought this prompted was that the Japanese might have some foreknowledge of the Allied plan to land on Guadalcanal. However that might be the increased air strength made the Allied need to strike them on the ground the more imperative.

About this time Kenney, with characteristic directness, clarified his relationship with Sutherland. G.H.Q's orders for the S.W.P.A. share in the Guadalcanal operation included a page and a half of air operations details—the numbers and types of aircraft to be dispatched, the designation of units, even the times for take-off and the size of the bombs. Kenney promptly demanded that they be rescinded. He has recorded that, as Sutherland "seemed to be getting a little antagonistic", he suggested that they see MacArthur, saying "I want to find out who is supposed to run this Air Force." The orders were rescinded without any appeal to the Supreme Commander.[1] D-day for the Guadalcanal offensive was at hand and if, as was true, Allied Air Forces S.W.P.A. fell far short of what MacArthur needed for a truly "offensive" part in that campaign and the fighting that must follow it, at least there was evidence of drive and initiative in his new air commander's approach to the task.

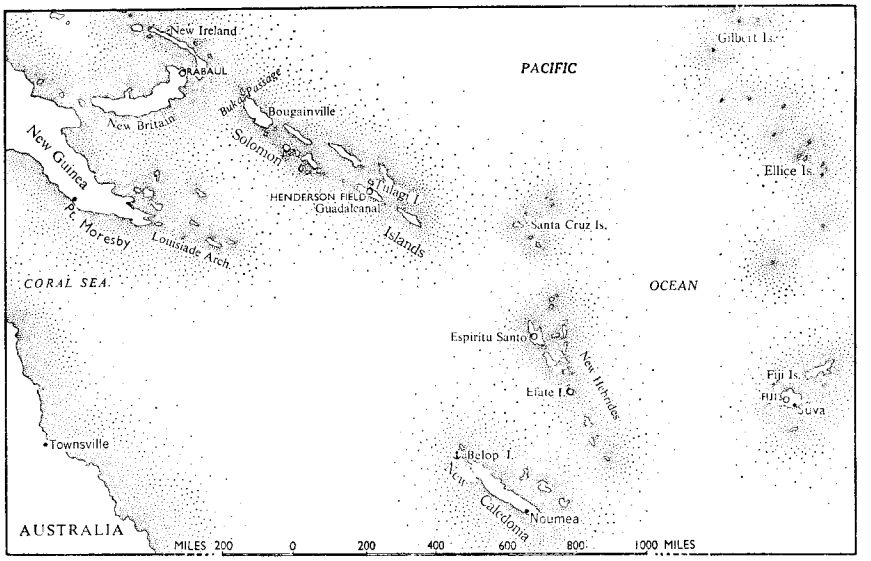
In April and May Vice-Admiral Ghormley's forces in the South Pacific Area had been gradually developing. In March the force which eventually became the Americal Division began to arrive in New Caledonia; the 37th Division began to arrive in Fiji in June. Rear-Admiral John S. McCain took command of Ghormley's air forces on 20th May with the title COMAIRSOPAC. By comparison even with the S.W.P.A. air forces McCain's command was a slender one. Forward at Efate in the New Hebrides he had a half-squadron of reconnaissance aircraft. On New Caledonia there were one Army bomber squadron; two fighter squadrons (one of the Army Air Force and one Marine); and a squadron and a half of Catalinas. To the east were one Army fighter squadron on Fiji, and one on Tonga, and a Marine fighter squadron and a squadron of bombers on Samoa.

Nearly 1,000 miles separated Efate, the northernmost American airfield, from Rabaul, the main Japanese base for operations along the island

[1] Kenney, pp. 52-3.

chain, and on 28th May a small body of American troops was moved to Espiritu Santo to prepare the way for an airfield construction group which was to come later.

In support of Ghormley's forces was a carrier squadron comprising *Saratoga,* flying the flag of Vice-Admiral Frank J. Fletcher, *Wasp* and *Enterprise,* with a strong force of other warships. The attack on Guadalcanal was to be primarily a naval operation but Army Air Forces in the Pacific were to give support. In addition to the contribution by No. 19



Group, No. 11 Heavy Bombardment Group in Hawaii was to be ready to give support in the South Pacific. On 30th July the first Fortress of No. 11 Group landed on the new strip on Espiritu Santo. From 31st July until D-day No. 11 made 56 bombing sorties against the Lunga Point area on Guadalcanal, while 10 Liberators of the U.S.A.A.F. and 6 Hudsons of the New Zealand Air Force conducted searches north-west from New Caledonia.

Thus there were now four, perhaps five, individual air forces employed in support of this first counter-offensive against the Japanese: the U.S. Naval Air Arm, the U.S. Marine Air Force, the U.S. Army Air Force, the New Zealand Air Force, and indirectly the Australian Air Force. As between the American Army and Navy this produced problems of command. Major-General Millard F. Harmon, who arrived at Noumea on 28th July to command the U.S. Army Forces in the South Pacific Area (USAFISPA) was to "supervise normal and routine employment of his air units, whereas operational control would rest with COMAIRSOPAC,

who normally would issue orders and instructions directly to defense commanders, task groups, or operational units as circumstances might dictate. For each base in the South Pacific, Admiral McCain prescribed a basic air organisation encompassing all Allied air units in the area. . . . Control and coordination of these units was vested in the island defense commander . . . and he in turn, exercised his command function through the air officer who controlled the local units."[2]

Harmon saw his needs clearly. He faced the certain prospect of a bitter struggle with an enemy who could be expected to strain every resource available to him to hold the Solomon Islands. He therefore pressed hard, with strong support from both Ghormley and Nimitz, for the immediate dispatch of three Lightning fighter squadrons to New Caledonia, replacements for No. 11 Group's losses in Flying Fortresses, a medium bomber squadron for Guadalcanal, two Fortress squadrons, one for New Caledonia and the other for Fiji, and three dive-bomber squadrons (the Douglas Dauntless aircraft, discredited in S.W.P.A.), one each for Guadalcanal, New Caledonia and Fiji.

Troops of the 1st Marine Division commanded by Major-General Alexander A. Vandegrift began landing at Tulagi at 8 a.m. on 7th August and at Lunga Point an hour later. About 11,000 marines were ashore on Guadalcanal by nightfall, the Japanese, 2,000 strong and mainly labour troops, offering little resistance. At Tulagi there was sterner opposition but the base was secured by the afternoon of the 8th.

The contribution to this operation by MacArthur's air forces was valuable, though impossible to determine in any precise detail. Thirteen of Carmichael's formation of sixteen Fortresses that had staged through Port Moresby, reached the target area over Rabaul to drop 46,000 pounds of bombs and destroy a number of aircraft on Vunakanau aerodrome. One of the Fortresses was shot down by enemy fighters but the American crews claimed to have shot down seven Japanese aircraft. Not the least value of the attack was the sense of achievement it gave to the men of No. 19 Group and Kenney further encouraged them by awarding a number of decorations. R.A.A.F. Catalina crews followed up with attacks made on several successive nights in which they remained over the target for several hours at a time. The secondary support given by successive attacks on Lae and Salamaua was also effective. Between 6th and 8th August 56 sorties—38 by Marauders, 13 by Mitchells, 3 by Catalinas and 2 by Flying Fortresses—resulted in the dropping of almost 150,000 pounds of bombs on the two aerodromes and their environs. The combined efforts of all these raids did not, however, keep the Japanese air units at Rabaul grounded for long. Although the marines' initial landings were made without air attack, the unloading of the ships of the expeditionary force was seriously delayed by two formations of enemy bombers which attacked with an interval of about an hour between them on the afternoon

[2] Craven and Cate, Vol IV, p. 31.

of the 7th. No serious damage was done to the ships themselves, though two destroyers were damaged and one of them which left for Noumea was never seen again.

For the next six months, while the tide of battle flowed back through the mountains of Papua and then forward again to the beaches of Buna and Sanananda, the Americans round Henderson Field on Guadalcanal held out against and finally defeated persistent Japanese attempts to drive them off the island, and a series of crucial naval and air-sea battles were fought in the seas round the Solomons. It is not one of the tasks of this volume to record in detail this long campaign. But the air, like the sea, has no boundaries. For the air forces the operations in the Solomons and those in Australian New Guinea constantly influenced each other.

The Japanese reacted promptly to the American landings and a force including seven cruisers hastened south from Rabaul. That evening the carriers withdrew. Rear-Admiral Richmond K. Turner, commanding the amphibious forces, thereupon decided that in the absence of air cover his transports must depart at daylight on the 9th, whether unloaded or not. That night the Japanese attacked, sinking the Australian cruiser *Canberra* and sinking or mortally damaging the American cruisers *Quincy, Vincennes* and *Astoria.* Fortunately the Japanese admiral then retired without attacking the transports. One of his cruisers was sunk by an American submarine on the way back to Rabaul.

The next heavy clash came on 24th August, when transports carrying 1,500 Japanese troops, covered by a strong fleet including three carriers and two battleships, arrived in the eastern Solomons. The American carrier groups took up the challenge and in an indecisive battle the Japanese carrier *Ryujo* was sunk.

On 20th August Henderson Field had been able to receive its first squadrons: one of fighters and one of dive bombers, both belonging to the Marine Corps. On the 22nd a first detachment of an Army fighter squadron arrived. The airfield was still in poor condition, however. It was unusable by bombers for the first five weeks, and after heavy rain the fighters were grounded. In this period the Fortresses were operating from Espiritu Santo, 640 miles away, but occasionally staged at Henderson Field.

The foothold on Guadalcanal was still precarious. Enemy warships regularly bombarded the beach-head at night and enemy aircraft bombed it by day. In early September the perimeter round Henderson Field was only 7,000 yards wide by 4,000 deep and no additional combat troops had reached the island.

On 31st August the carrier *Saratoga* was torpedoed by a Japanese submarine 260 miles south of Guadalcanal. Her aircraft were flown off to Henderson Field and she steamed to Pearl Harbour for repairs. On 15th September *Wasp* was torpedoed by another submarine and sunk. This left only one carrier, *Hornet,* in the South Pacific, until *Enterprise,* under repair at Pearl Harbour, rejoined in mid-October.

On the night of the 11th-12th October an American task force intercepted a Japanese squadron making the regular nightly run to Guadalcanal to land troops and bombard the beach-head, and sank a cruiser and two destroyers. Despite this, the Japanese sent two battleships to bombard Henderson Field on the 14th while transports landed 4,500 troops, making their force on the island about 29,000 strong. On the 13th the defenders had also received a large reinforcement—the 164th Regiment—from the Americal Division on New Caledonia.

On 20th October, before the battle opened, Admiral William F. Halsey had replaced Admiral Ghormley. He promptly ordered the construction of a second bomber strip well to the west of Henderson Field.

The Japanese attack which followed from 23rd to 26th October failed to make any deep impression on the perimeter. The Marines estimated that 2,200 Japanese had been killed in the costly frontal attacks. On the 26th—the day on which the land battle ended—the Japanese sent down the strongest naval force yet launched against the Americans in the Solomon Sea. It included four aircraft carriers—*Shokaku, Zuikaku, Zuiho* and *Junyo*. In the carrier-plane battle that followed the *Shokaku* and *Zuiho* were severely damaged and the *Hornet* sunk. Again the Americans had only one carrier, *Enterprise,* in the South Pacific, and she had been damaged.

Despite their failures in October the Japanese continued to attack by sea, land and air. Reinforcements were put ashore almost nightly. The Americans too sent in reinforcements: a regiment of marines on 4th November and a second Army regiment on 11th-12th November. On the 12th-13th there was a confused night battle between the supporting naval forces in which the Japanese lost the battleship *Hiyei* and two destroyers and the Americans two cruisers and four destroyers. In the next two days American aircraft destroyed all the eleven transports in the Japanese convoy. On the night of the 13th-14th the battle was renewed. This time the American force included two battleships and *Enterprise,* and the Japanese had one battleship, *Kirishima,* and four cruisers. The *Kirishima* and a destroyer were sunk, the Americans losing three destroyers.

This struggle to hold a few square miles of territory on a remote Pacific island soon began to exert a big influence on Allied strategy. Inevitably American forces were attracted to the only point at which American land forces were in action. President Roosevelt had urged in October that "every possible weapon" should be sent to hold Guadalcanal.[3]

The 2nd Marine Division was on its way to the Solomons. The 43rd Division sailed from San Francisco on 1st October for New Zealand whence it was shipped in November to Guadalcanal. In December the 25th Division departed from Hawaii for Guadalcanal. By January 1943 there were 8 American divisions in the European and African theatres, but there were 11 overseas in the Pacific, including two divisions of

[3] R. E. Sherwood, *The White House Papers of Harry L. Hopkins,* Vol II (1949), p. 622.

marines (three of the army divisions were in Hawaii). Early in December there were 34 groups of the Army Air Forces in the European, African and Middle East theatres, and 25 deployed against the Japanese. When the aircraft carriers and the Marine Corps' squadrons are taken into account the American air forces facing the Japanese were stronger than those facing the Germans and Italians.[4]

On 15th September one squadron of No. 5 Heavy Bombardment Group in Hawaii was ordered to join No. 11 Group at Espiritu Santo and two more squadrons of No. 5 arrived in October.

After the November offensive the Japanese used only destroyers to carry men and supplies to Guadalcanal, until, in the first days of February 1943, they admitted defeat, and withdrew their force from the island. It was then about 12,000 strong; the defenders at that stage were organised into the XIV Corps, which included the Americal, 25th and 2nd Marine Divisions.

Between 20th and 30th August 1942 seven squadrons had been established at Henderson Field if detachments from two dive-bomber squadrons from *Enterprise* are included. By 2nd February 37 squadrons were based there. These were provided by four separate Services: the Marine Corps, 16 squadrons; the Naval Air Arm, 10 including parts of carrier squadrons; the Army Air Force, 9; the R.N.Z.A.F., 2. In the total were 16 squadrons of fighters, 16 of bombers including torpedo bombers, 3 of reconnaissance aircraft, and 2 of Catalinas.

For both sides the struggle for Guadalcanal had proved a costly campaign of attrition. The American Army and Marine Corps had committed about 60,000 troops of whom about 1,600 were killed and 4,245 wounded; the Japanese had used about 36,000 men of whom 14,800 were killed, 9,000 died of illness and 1,000 were taken prisoner. At sea the Americans had lost 2 aircraft carriers, 8 cruisers, 14 destroyers, totalling 126,000 tons; the Japanese losses were 2 battleships, one carrier, 4 cruisers, 11 destroyers, 6 submarines, totalling 134,000 tons. Both sides had lost heavily in aircraft. The Japanese defeat, however, was far heavier than these figures indicate. Their advance towards the Pacific supply line had been halted. They could replace the losses of naval and merchant ships and aircraft at only a fraction of the rate at which American shipyards and factories were producing ships and aircraft even then. Of immense value too was the experience gained by American troops, seamen and airmen from generals and admirals downwards. A great part of the American Navy had learnt important lessons round Guadalcanal; four hitherto raw infantry divisions had fought on the island; twenty-five American air squadrons, not counting those of the naval air arm, had fought from Henderson Field, and the heavy-bomber crews of Nos. 11 and 5 Groups and the crews of other units operating from bases farther south were now veterans.

[4] There were 4 groups in the Central Pacific, 5 in the South Pacific, 10 in the South-West Pacific, 4 in the China-India theatre, and 2 in Alaska.

The Army Air Force units had not been entirely happy under naval control. In particular, the senior Army Air Force officers considered that their Fortresses were used too much for reconnaissance and too little for strikes. On 29th November General Harmon proposed to Washington that an autonomous South Pacific air force be created from all Army Air Force units in the South Pacific Area, under the command of Brigadier-General Nathan F. Twining, of his staff, and that it should include a bomber and a fighter command. This was approved, and on 13th January the Thirteenth Air Force came into being. It comprised: Nos. 11 and 5 Heavy Bombardment Groups each of four squadrons of Fortresses; Nos. 69 and 70 Medium Bomber Squadrons (Marauders); No. 347 Fighter Group (2 squadrons of Airacobras, 1 of Kittyhawks and 1 of Lightnings); No. 12 Fighter Squadron (Airacobras); No. 44 Fighter Squadron (Kittyhawks); No. 13 Troop Carrier Squadron (Dakotas).

Thrown into relief by the Guadalcanal campaign were two points of strong disagreement between the U.S. Navy and the U.S. Army Air Force. These were the deployment of air units on the South Pacific "island chain" defence line, and European versus Pacific claims to the allocation of available forces.[5] Closely related because they both concerned the acquisition of aircraft, they held considerable interest too for MacArthur's command which was a participant in the campaign to the extent that it lent what support it could. Divergence on the question of South Pacific island air defence rested in the navy's consistent advocacy of a series of island air bases, each defended by a substantial force including heavy bombers, as opposed to the Army Air Force conviction that it was quite wrong to immobilise urgently needed heavy-bomber strength in defending lesser island bases, and that the true answer to the question lay in placing a major mobile striking force at either end of the Pacific "line"—Australia and Hawaii—with fighter strength disposed along the line itself.

The chief contenders were Admiral King and General Arnold. As King saw it, the Coral Sea battle had but delayed the Japanese offensive. When the Joint Chiefs of Staff had reviewed Pacific strategy on 11th May he had taken the view—of pointed interest in the light of the sea-air actions that were to be fought in the early stages of the Guadalcanal campaign—that it would be futile to oppose, with two undamaged carriers, a powerful enemy force striking along the line, unless the carriers were supported by land-based bombers. He proposed a trial concentration of land-based aircraft on island bases as a test of how quickly this could be done and what added operational facilities would be needed. The War Department ordered preparations for such a test in the Fiji Islands and New Caledonia, but the battle of Midway had intervened. The planners were agreed that aircraft carriers should not be used other than as essential components of task forces, so upholding the navy's objection

[5] For a detailed account of these issues and their influences the reader is referred to Craven and Cate, Vol IV, pp. 13-21 and 44-60. This work has been the principle source for the survey given above.

to placing them in fixed relation to given shore positions—they must have freedom to operate in the theatre as a whole. The navy, who incidentally regarded the allocation of heavy bombers to the S.W.P.A. as insufficient to meet that area's needs as well as being able to cope with a sudden emergency, thought that the air force failed to appreciate fully the problems of distance and logistics and placed overmuch faith in the efficacy of air attack. Thus they argued: "Exclusive reliance on long-range aircraft from Hawaii and Australia to meet the needs for the defense of intervening communications will jeopardise the safety of these communications and of the forces overseas which depend on them."[6]

The air force also claimed freedom of movement in the area and held to the concept of maintaining air bases disposed to accommodate a mobile air striking force so that such a force could be concentrated when and where needed. A chain of "subsidiary fortresses" stretched out across the Pacific, it was held, was uneconomical and out of keeping in a theatre entitled to minimum rather than large air forces. The mobile forces they advocated for Australia and Hawaii could be concentrated at the centre of the island chain in approximately one day. It was acknowledged that such a mobile force might not be assembled quickly enough to repulse an enemy carrier force which could strike and withdraw quickly, but it could be concentrated in time to oppose an enemy landing in force.

When General Marshall put the issue before Mr Roosevelt, early in May, the President appeared confident that strong Japanese offensives against Australia or New Zealand could be prevented. He directed that the flow of aircraft to the Pacific should be limited to the need to maintain existing commitments at full strength and refused to divert forces from the European theatre.

The rival claims of the two theatres were still being keenly debated four months later. On 24th July there had been a temporary swing in favour of higher priority for the Pacific. This came from a decision that an invasion of continental Europe should be postponed, which led in turn to agreement by the Combined Chiefs of Staff that in addition to American forces to be withdrawn from BOLERO—the name given to the plan to build up forces in Britain—for operations in North and North-West Africa, 15 air groups could be withdrawn from the same source for offensive operations in the Pacific.

But the hopes of Pacific commanders, thus stimulated, were soon reduced to the *status quo*. By the end of the month it was found that the needs of the North African operation would absorb the entire output of the aircraft factories. Even so King told Arnold in September that he regarded the statement of the Combined Chiefs of Staff on 24th July as a mandate to withdraw air groups from the forces allotted to Europe, adding that his contention gained force from the fact that this decision had been made before the intensity of the Japanese air attacks on Guadalcanal had so greatly increased the urgency in that sector. But Arnold,

[6] Submission to Joint Chiefs of Staff, 2nd May 1942.

unshakeable in his conviction that Germany was "Enemy No. 1", pointed to a previous decision of the Combined Chiefs which insisted on a maximum offensive against Germany at the earliest practicable date, and a strategic defensive with minimum forces in other theatres. That, he held, was a fundamental concept unaltered by any subsequent agreement. The North African invasion plan had been given the highest priority by President Roosevelt and Mr Churchill, and any diversion of air strength would jeopardise that operation. No pleas on behalf of the American forces facing the Japanese in the Solomons would move him. The pressure of the air war must be maintained in Europe to prevent the *Luftwaffe* moving its strength to North Africa; Germany's "vitals" were open to the Allied heavy bombers, which was not yet true of Japan, and Admiral Nimitz had authority to move air units throughout the Central and South Pacific. This last point was made in reply to a statement by King that the initial loss of the Marine air squadrons on Guadalcanal, based on the first 25 days of operations, was 57 per cent, a rate of attrition which, he declared, the navy could not meet if it was to continue to operate its carriers.

General Arnold who, late in September, made a rapid tour of the Pacific, added to his emphatic contentions the point that, even if additional aircraft were made available, the base facilities in the theatre would not be able to accommodate them. The real problem, he believed, was proper distribution of the aircraft already there. Thus the struggle between the two Service heads continued while the situation on Guadalcanal steadily became more grave for the American forces. On 24th October when Roosevelt urged that "every possible weapon be sent", Marshall pointed to lack of transports rather than troops as the gravest need, and reported that 23 heavy bombers were being flown in as reinforcements, with 53 fighters following by sea.[7] MacArthur had been told to be ready to provide bomber reinforcements and Lightning fighter replacements, on call.[8] Marshall, too, indicated the extent of the drain on aircraft in the United States by reporting that it would be impossible to draw on replacement training units at home without fatally checking the flow of trained aircrew to the various theatres, and that Western Defence Command had but 25 heavy bombers, none of them of the right type for combat in the Pacific.

Finally, on 27th October, the Joint Chiefs of Staff approved a plan that ended the long-drawn-out debate; if this plan was carried out the South Pacific Command would never have fewer than 70 heavy bombers, its medium-bomber strength would be 52 and its fighter strength 150, not counting a squadron on Canton Island, one (R.N.Z.A.F.) on Fiji and detachments on Palmyra, Christmas, Johnston and Fanning Islands. All these aircraft were at the "complete disposal" of Nimitz whose autho-

[7] On 27th October 1942 Harmon had 47 Fortresses (35 combat-worthy), 8 Liberators of a new group (No. 90) that were on their way from Hawaii to Australia, and 7 Fortresses of the battle-weary No. 19 Group then staging back to the United States, which were held in Fiji in case of need and which in fact were used for some operations.

[8] Eight Lightnings of No. 39 (U.S.) Fighter Squadron flew direct from Milne Bay to Henderson Field and remained there until 22nd November 1942.

rity to deploy all available air forces in the South and Central Pacific was restated on 14th November, a proviso being that he must move them as units and not as individual aircraft and crews.

In the appointment of Major-General Harmon as commander of the U.S. Army Forces in the South Pacific Area, there were all the ingredients for a clash of personalities among the commanders resulting from inter-Service rivalry and divided command; a subject that, as already noted, was one for deep concern in the air component of General MacArthur's neighbouring command. In the South Pacific Command, as with the R.A.A.F. in Australia, the air force was willing to sacrifice operational control (in this instance to the U.S. Navy) but not "the training and indoctrination" of air units in the area. This was agreed, and Harmon, who was clearly informed that his appointment was subordinate to that of Vice-Admiral Ghormley, was charged with, among other tasks, the training of all army air units in the area both ground and air. To take up his new appointment Harmon had relinquished that of chief of the army's air staff. It was understandable therefore that he held strong opinions on the issue of forgoing operational control. But he was now serving in a naval command and had received no War Department directive to support his opinions on this always delicate point. With wisdom perhaps rare in such circumstances he therefore refrained quite deliberately from engaging in debate with Ghormley and Vice-Admiral McCain. The situation as he saw it "demanded a maximum effort to ensure the complete cooperation of all services necessary to defeat the Japanese, and he was determined to support his directive as fully as possible".[9] This sensible and realistic attitude set a high standard of command behaviour that was maintained throughout one of the most crucial and, from the command viewpoint, most frustrating campaigns in the war against Japan. It was this standard that prompted an American historian to conclude his review of the first and critical phase of the Guadalcanal battle with the statement that:

> The maximum effort of the Japanese had been met and turned back, and many of the initial problems of the South Pacific had been overcome. The solution for others must wait, but there was an awareness among an increasing number of personnel that service loyalties were subordinate to the primary task: defeat of the Japanese.[1]

The Fifth Air Force, which General Kenney was to command while retaining his senior appointment as Commander, Allied Air Forces, had come into being officially on 3rd September 1942. With headquarters at Brisbane, it had eight groups plus one photographic-reconnaissance squadron. There were three groups of fighters and five of bombers. Temporarily the headquarters of the new Fifth Bomber Command were established at

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[9] Craven and Cate, Vol IV, p. 33.

[1] Craven and Cate, Vol IV, p. 60.

Townsville. Fifth Fighter Command was planned but its formation was deferred until sufficient units were available.[2]

In a letter to General Arnold, Kenney explained that, because in addition to operations he was responsible for administration and planning for both Allied Air Headquarters and Fifth Air Force, it was necessary for him to have his own headquarters at Brisbane, and, because all heavy and most medium-bomber units must remain based in Australia—Japanese air attacks still enforced this—it was necessary to accept the "horrible handicap" of operating from advanced bases. He therefore established an advanced headquarters—Advanced Echelon or Advon, as it became known—at Port Moresby under General Whitehead, whom he appointed as deputy commander of the Fifth Air Force.

Thus far Kenney was able to constitute an independent American air force. Simultaneously he had to provide an answer for General MacArthur to the question what should be done with the operational units of the R.A.A.F. On the day after the formal constitution of the Fifth Air Force, MacArthur wrote to the Australian Prime Minister, acquainting him of the details of this decision and stating that it was "considered advantageous to exercise operational control" of the Australian squadrons assigned to his command then performing defensive and anti-submarine duties around the perimeter of Australia. General Kenney would designate Air Vice-Marshal Bostock to exercise this operational control "through appropriate Area staffs as a single element" which, he anticipated, would be named "Coastal Defence Command". The letter added that, while the units in this command would be largely R.A.A.F. squadrons, they might include any number of squadrons from the Fifth Air Force. Conversely, R.A.A.F. squadrons or groups might operate with Fifth Bomber Command or Fifth Fighter Command as, indeed, several were now doing in New Guinea.

"It will be noted in this organisation," the letter continued, "that no essential change is contemplated. It is not proposed to request that Air Vice-Marshal Bostock be named to command R.A.A.F. units. Command will rest, as at present, with the Chief of the Air Staff. Air Vice-Marshal Bostock will merely exercise operational control of certain U.S. and R.A.A.F. units assigned to the Allied Air Forces, which are performing a special function. He will remain at Headquarters, Allied Air Forces, utilising the operations, intelligence and communications facilities now existing, thus avoiding duplication and increase in overhead. Eventually, upon the withdrawal of the Fifth Air Force, the R.A.A.F. elements in the Coastal Defence Command and in Allied Air Force Headquarters, will remain as an operating headquarters, thus avoiding even temporary dislocation of R.A.A.F. functions. Its disposition will, of course, then rest with the R.A.A.F."

Next day an order constituting the Coastal Command and designating Bostock as its air officer commanding, was issued from Kenney's head-

[2] Standard unit strength in the USAAF at the time was 3 squadrons for fighter groups and 4 each for bomber, reconnaissance and transport groups.

quarters.[3] It concluded: "The organisation of the Coastal Command . . . does not alter the functions and responsibilities of R.A.A.F. Headquarters, Melbourne." The decision to form R.A.A.F. Coastal Defence Command was promulgated to R.A.A.F. units on 18th September in a R.A.A.F. Organisation Memorandum which specifically stated that the command would not have any administrative control. On 21st September the new force was more suitably renamed R.A.A.F. Command, Allied Air Forces.[4]

Mr Curtin referred to the Australian Chiefs of Staff Committee the letter he had received from General MacArthur, together with a copy of the War Cabinet's decision (in April) to approve the assignment of all combat sections of the Australian forces to MacArthur's South-West Pacific Area Command. The committee was directed to report specifically on the R.A.A.F's organisation, operational efficiency and the machinery for command and administration. Further, it was to consider the role of the R.A.A.F. in the whole plan of Australian defence, both as an independent Service and in relation to the navy and army. This was to be considered from the viewpoint both of the existing organisation of the South-West Pacific Area and after the withdrawal of the Fifth Air Force from Australia.

As a member of this committee Air Vice-Marshal Jones took the opportunity to make his own opinions quite clear. Since the initial agreement with Allied Air Headquarters had virtually been cancelled, he sought the return to R.A.A.F. Headquarters of all R.A.A.F. officers who had been serving with A.A.F.H.Q.—"Extra R.A.A.F. (Staff with Allied Air Headquarters)" as they had been designated by the Air Board—and the restoration of operational control of R.A.A.F. units to the Chief of the Air Staff. Under this plan Bostock was to become Vice-Chief of the Air Staff.

On 26th September the Chiefs of Staff reported that, while accepting the formation of R.A.A.F. Command, Allied Air Forces, it was desirable that it should be established, like the Fifth Air Force, with unified operational and administrative control, and that this control should be vested in the Chief of the Air Staff whose operational responsibility, subject to the direction of Allied Air Headquarters, should normally be exercised through the Air Officer Commanding R.A.A.F. Command. This would permit day-to-day operational direction by Allied Air Headquarters and the Commander, R.A.A.F. Command, without delay, and would at the same time, preserve the principle of unified control of the R.A.A.F.

At first Kenney was inclined to accept the committee's proposal which was in keeping with MacArthur's assurances to Curtin, but Bostock opposed it and, after further review, G.H.Q. rejected it.

At this time R.A.A.F. Command comprised all the operational units of the Australian Air Force in the South-West Pacific except those in New Guinea (which came under American command), and the American

[3] Allied Air HQ General Order No. 47, 5th September 1942.
[4] Allied Air HQ General Order No. 53.

units (in No. 49 Fighter Group) serving in North-Western Area. R.A.A.F. Headquarters thus had extensive and widespread administrative responsibilities but no operational functions whatever. The endeavour which Jones had made to regain operational control of the R.A.A.F. in the South-West Pacific was understandable, but the influence of the wholehearted way in which Curtin had offered Australia's defence forces to the American Command was strong and the system of Air Board control, which had been challenged unsuccessfully by Brett and Burnett six months earlier, held no appeal for MacArthur or Kenney, while Bostock clearly was not willing to serve as Vice-Chief under Jones. With that unwelcome prospect eliminated, Bostock, who had been freed from his appointment as Chief of Staff, Allied Air Forces, a role to be filled very soon by Brigadier-General Donald Wilson who arrived from the United States on 18th September, formed the headquarters of his new command in Brisbane close to G.H.Q. and A.A.F.H.Q.

Bostock's senior staff in R.A.A.F. Command was drawn mainly from the other R.A.A.F. officers who had been serving at A.A.F.H.Q., notably Group Captain Scherger, Director of Defence; Group Captain Ewart, Senior Administrative Staff Officer; Group Captain Walters, Senior Air Staff Officer; Group Captain Wiggins, Chief Signals Officer; and Group Captain Hancock, Director of Plans. The Command operated through the area system. The areas, somewhat amended again, became R.A.A.F. formations.[5]

The absence of direct liaison between R.A.A.F. Headquarters and Allied Air Headquarters caused through the changes in command was met by the formation in Brisbane on 9th September of Forward Echelon, R.A.A.F. Headquarters, with Group Captain Packer, a former Director of Intelligence, as commanding officer. Packer thus became the accredited representative of the Chief of the Air Staff with the Commander, Allied Air Forces. He also served as liaison officer with the separate headquarters of Allied Naval and Land Forces. The exception among the R.A.A.F. operational units to come under the control of R.A.A.F. Command were, as mentioned, all Australian operational air units serving in New Guinea. These units, originally controlled from North-Eastern Area Headquarters, had already been brought within the control of a R.A.A.F. group—No. 9 Operational Group—which had been formed on 1st September to provide what in effect was a mobile offensive force.[6] Under the strong leadership of Group Captain Garing, its first commanding officer, the group quickly achieved cohesion among the R.A.A.F's operational squadrons, forming

[5] On 19th August the boundaries of North-Western, North-Eastern and Western Areas were revised. North-Western Area took in the whole of the Northern Territory and that portion of Queensland contained within the Shire of the Barkly Tableland and the districts of Haslingden and Heywood, and that portion of Western Australia north of a line drawn from Yampi Sound to the intersection of 20 degrees S. latitude with the western boundary of the Northern Territory. North-Eastern Area took in the whole of Queensland except that portion included in North-Western Area, and Western Area the whole of Western Australia except that portion of its area allocated to North-Western Area.

[6] Air Commodore Cobby had succeeded Air Commodore Lukis on 25th August 1942, in command of North-Eastern Area Station HQ, Townsville, formed on 23rd February 1942 and disbanded and replaced by Operational Base Townsville on 3rd July 1942. RAAF Station HQ, Port Moresby, similarly became an operational base on 6th July 1942,

them into an effective striking force at the most critical combat period in the New Guinea campaign. Initially the group came under the operational control of Allied Air Forces Headquarters, a control soon to be exercised by Whitehead as commander of Advanced Echelon, Fifth Air Force.[7]

The prompt formation by A.A.F. Headquarters of R.A.A.F. Command and the rejection of the Australian Chiefs of Staff proposal of 26th September had, as noted, brought a strong reaction from Jones. The Air Board, having promulgated the decision of A.A.F. H.Q. to form R.A.A.F. Command, took no administrative action to recognise that command as an element within the R.A.A.F. organisation. This caused Bostock to write at length to the board on 7th November saying in part:

> The satisfactory discharge of the responsibilities laid upon me by the Commander, Allied Air Forces, is not possible without the complete support of the Air Board, since it is my view that a commander cannot exercise efficient operational control and direction unless he is accorded a voice in the determination of policies and major matters concerning the organisation, administration, equipment, supply, and technical maintenance of his command.

Bostock added that the organisation of R.A.A.F. Command, the responsibilities of the air officer commanding, and the relationship of R.A.A.F. Command to the Air Board and to the R.A.A.F. as a whole, should be promulgated at the earliest possible date. This was urgently necessary to ensure that subordinate commanders and staff officers throughout the Service might be properly informed and instructed. He added:

> In the absence of a clear definition by the Air Board, I am severely handicapped because it is frequently made evident to me that the Service as a whole is confused and bewildered. Operational commanders and staff officers of R.A.A.F. Headquarters, as well as staff officers of my own headquarters, are uncertain of their responsibilities, their obligations and the scope of their authority.

In the meantime, in October, the Prime Minister had arranged an interview between the Commander-in-Chief and the Secretary of the Department of Defence, Mr Shedden,[8] in the hope that the problem might be clarified. Shedden, who had outlined for MacArthur the proposals of the Australian Chiefs of Staff, later reported to Curtin that MacArthur considered that if the course proposed by the Chiefs of Staff—unification of operational and administrative control under the Chief of the Air Staff —was adopted, the situation would be comparable to that in the Australian Army, in which General Blamey must, sooner or later, choose between going forward with the land forces in offensive operations or remaining in Australia to command the forces retained for the defence of the base. Since the same principles appeared to apply to both Services, Curtin deferred any decision or action on the R.A.A.F. problem in anticipation of a review of the whole command question.

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[7] Responsibility for administration and discipline of the group was initially with North-Eastern Area HQ but, on 1st January 1943, it became a separate command under the administrative control of RAAF HQ.

[8] Sir Frederick Shedden, KCMG, OBE. Secretary, Defence Committee 1929-36, Dept of Defence 1937-57, to War Cabinet 1939-46. Of Melbourne; b. Kyneton, Vic, 8 Aug 1893.

In his reply to Bostock, written on 20th November, Jones stated that no administrative action had been taken by R.A.A.F. Headquarters to include his command as a R.A.A.F. formation because the decision of the Commander, Allied Air Forces, to constitute it "was not concurred in by this Headquarters or the Minister for Air . . .", adding ". . . it now becomes necessary to embody the personnel who previously constituted the R.A.A.F. component of Allied Air Headquarters into the R.A.A.F. organisation in a form both acceptable to this headquarters and most convenient from the point of view of administration and organisation". The letter continued:

> It is therefore proposed to organise the staff required by the Allied Air Commander to exercise operational control of R.A.A.F. units, as portion of R.A.A.F. Headquarters under the title of Directorate of Operations, Communications and Intelligence. The organisation so created will overcome the difficulties referred to in . . . your letter by enabling the officer holding the appointment of Director to deal with these matters of organisation and administration in the normal manner. The necessary action will be taken and orders issued to give effect to the organisation outlined above, and appropriate establishment tables will be issued in due course.

A copy of this letter was sent to Kenney who also received a letter from Bostock in which he declared:

> My present position is that I am placed in an untenable position in which I am unable to discharge my responsibilities as Air Officer Commanding R.A.A.F. Command A.A.F., since all recognition and support by the R.A.A.F. administrative organisation is withdrawn. I do not think that command can be exercised by a director of the central headquarters of a fighting service. I believe that Jones' proposals are impracticable and display a lack of appreciation of the true functions of command.

In the same letter Bostock added that he might have to relinquish his appointment. Kenney's reaction to the two letters was to send word to Jones that he did not wish any action taken on the proposal to form a directorate of operations, communications and intelligence until they had had an opportunity to discuss it; and to write to Bostock saying:

> The last thing I want to do is to relieve you of your present job and I will quarrel with you on that score. I not only sincerely believe you the best qualified officer in the R.A.A.F. to handle operations but am especially desirous of having you on my side all the way back to Tokyo.

The next move came from R.A.A.F. Headquarters, which, on 5th December, issued an Air Force Confidential Order which recapitulated the changes that had occurred in the R.A.A.F. since April and gave its definition of the positions of "the staff now known as RAAF Command".[9] Kenney's action in forming the command was described as "a temporary measure to facilitate his operational control of the R.A.A.F. operational units assigned to him". The order stated further:

> It is intended that, on relinquishment of control by the Commander, Allied Air Forces, the staff now known as R.A.A.F. Command, Allied Air Forces, shall revert

[9] AFCO 391—Organisation of RAAF Operational Control 151/2/581, 5th December 1942.

to R.A.A.F. Headquarters as Directorates of Operations, Intelligence and Communications respectively. The staff is therefore being organised on this basis and appropriate establishment tables are being issued.

This staff is to be responsible to the Commander, Allied Air Forces, for operational control only, of R.A.A.F. units assigned to it by him. All matters of R.A.A.F. policy, administration, discipline, training, supply and maintenance are the responsibility of R.A.A.F. Headquarters. Nevertheless the R.A.A.F. staff, Allied Air Forces, is to offer advice to R.A.A.F. Headquarters on all matters affecting operations and is to give its views and relevant information on such matters as may be requested by R.A.A.F. Headquarters from time to time.

Bostock, on the 12th, wrote to the Air Board, describing this order as "a confusion of ideas". He claimed that it misrepresented the operational organisation required by Kenney, failed to state his own responsibilities as air officer commanding R.A.A.F. Command, and misrepresented the functions of his headquarters. The assertion that the organisation was intended as a "temporary measure" was misleading, he held; a change of Government policy or the end of the war were the only contingencies which Kenney had envisaged as requiring a change of organisation. The final paragraph of the order Bostock described as "unintelligible" because the staff of the command was responsible to the Air Officer Commanding and not to the Commander, Allied Air Forces. It was "ridiculous", he said, to require the staff to offer advice to R.A.A.F. Headquarters—a duty which could be performed only by the Air Officer Commanding, on whom the responsibility rested "to obtain the administrative services necessary to carry out the orders of the Commander, Allied Air Forces". The apparently deliberate omission from the order of all mention or reference to himself, Bostock wrote, had resulted in "presenting a picture of a complicated and impracticable organisation" for which there was no justification. The order was "badly drafted, misleading and likely to add to the already dangerous state of confusion now existing throughout the R.A.A.F." It should be withdrawn, he claimed, and a more suitable order published as early as possible.

On receipt of this letter, Jones wrote (on 16th December) to Drakeford, submitting a copy of Bostock's letter and declaring that the basis of Bostock's case—"that the command of R.A.A.F. operational units was assigned to him by the Commander, Allied Air Forces"—was unacceptable because operational control only, as apart from disciplinary control, had been assigned by Kenney who, manifestly, was unable to assign powers which he did not possess. Such a memorandum from a senior officer to the headquarters of his Service could be regarded only as "a very serious matter, indicating unwillingness to cooperate within the terms of the organisation laid down by competent authority".

Since his appointment as Chief of Staff to the Commander, Allied Air Forces (Jones' letter continued), Air Vice-Marshal Bostock has consistently endeavoured to obtain control of certain aspects of administration and organisation of the R.A.A.F. and has shown great resentment when his efforts in this direction have been checked. He has allowed his attitude to be known widely throughout the service and the effect of this on discipline is now assuming serious proportions. . . .

On the separation of the 5th Air Force and R.A.A.F. Command Staff from what was formerly Combined Staff of Allied Air Headquarters, I represented that the R.A.A.F. operations and administrative staffs should be reunited. Air Vice-Marshal Bostock bitterly opposed this, and for the sake of harmony the matter was not pressed. In order to achieve the maximum degree of cooperation, a Forward Echelon of our headquarters administration staff was established in Brisbane and I have no reason to believe that the service has suffered to any great extent because of the continuance of separate control of operations and administration. This result has been achieved, however, in spite of the attitude of our operations staff in Brisbane, which has not always been cooperative. In view of the position that has now arisen, I find myself forced to recommend that Air Vice-Marshal Bostock be relieved of his present appointment and posted to some other appointment where his well-known ability can be used to advantage, but in which he will not be able to cause further friction between the different sections of the service and our Allies.

Drakeford, conscious of the favour in which Bostock was regarded at Allied Air Headquarters, after discussing the proposal with Curtin, dissuaded Jones from pressing his recommendation.

Kenney accepted Drakeford cordially. "I considered that he was sincere and honest," he wrote of the Minister later, "and would help in every way possible. . . . One thing that I liked about him was that he didn't pretend to know anything about aviation or the strategy or tactics involved in the use of air power. He looked after the interests of the R.A.A.F. when it came to budget matters, allocation of manpower, resources and industry, and left the operating end to the operators."[1]

On 28th December the Air Board recorded their opinion in a minute, which declared: "The Board regards Air Vice-Marshal Bostock's attitude as a challenge to the position and authority of both the Chief of the Air Staff and the board." The board claimed that the organisation which Bostock desired was contrary to the principles laid down by the War Cabinet; that it was inconsistent with General MacArthur's letter to the Prime Minister (4th September) and with Kenney's order constituting the force he commanded; that it would give him complete command, both operational and administrative, of all operational and associated units of the R.A.A.F. Already there were several Area Commands to which the Air Board had delegated appropriate responsibility and the board considered that a further superior command headquarters could be set up only by transferring to such a command the whole or part of the powers and responsibilities of the Chief of the Air Staff and the board. This would lead to a "hopeless state of confusion". If it was to serve any useful purpose, such a command would inevitably have to become the superior headquarters of the R.A.A.F. The existing organisation was "working reasonably well", and, if any change was to be made, the board considered that it should be one to reunite all sections of the R.A.A.F. Headquarters staff on the same basis as before the arrival of the United States Forces. It might be necessary for the Deputy Chief of the Air Staff to be situated normally at the headquarters of the Commander, Allied Air Forces, whose directions he would accept as representative of the Chief of the Air Staff.

[1] Kenney, p. 81.

This would be in keeping with the recommendation of the Chiefs of Staff Committee which examined the subject. The Air Board viewed "with alarm and apprehension any move which would tend to divide the R.A.A.F. into two sections not wholly under the same controlling authority" and which would "seriously weaken the fighting value of the service" and might do "very great harm to discipline and morale".

The Prime Minister, disturbed by the continuing friction, summoned Bostock and Jones to a conference with Drakeford and himself and, after hearing the contending views, directed that the problem should be referred to the Defence Committee (the Chiefs of Staff plus the Secretary of the Department of Defence) which should consult Bostock and then review the whole question and make recommendations. After reiterating the need for "unified operational and administrative control of the whole R.A.A.F. within Australia and its Territories under one head", the committee noted that a review of army organisation as a result of experience in New Guinea was pending. Since this might have a bearing on the organisation of the R.A.A.F., it was recommended that, pending the reorganisation of the air force, R.A.A.F. Command should be a R.A.A.F. unit to exercise operational control only over R.A.A.F. units assigned to the South-West Pacific Area; that administrative requirements should be met through the existing R.A.A.F. machinery; that the Air Officer Commanding R.A.A.F. Command should keep the Chief of the Air Staff informed on operational planning, and that the Chief of the Air Staff should keep the Air Officer Commanding R.A.A.F. Command informed on organisation and administration affecting the R.A.A.F's operational command. Bostock, it was stated, agreed with the committee's recommendations.

Curtin, whose association with MacArthur was most cordial, wrote to the Commander-in-Chief on 11th January reviewing the problem in considerable detail. He recalled the discussion which Shedden had had with MacArthur, outlined his understanding of the general's views as reported to him by Shedden, and said that he had deferred the question until there was an opportunity to discuss its wider implications with General Blamey. He said that "administrative requirements for operational purposes are to be met through the existing R.A.A.F. machinery". This, he remarked, would require "the closest cooperation between R.A.A.F. Headquarters and R.A.A.F. Command". The Chief of the Air Staff would "consider measures necessary to achieve this, including the provision of suitable administrative advisory staff for the Air Officer Commanding, R.A.A.F. Command". The arrangements made for a full flow of information on operational plans from Bostock to Jones (with reciprocal action on Jones' part concerning administration) conformed with the principles already agreed upon by which the Australian Chiefs of Staff were supplied with operational information so that they could discharge their responsibility to advise the Government on Australian defence policy. Curtin made it clear that the arrangements he had outlined were intended to operate pending the result of the review of army and air force organisation. He per-

sonally agreed with the proposals and said that he would be glad to have MacArthur's approval of them. He intended, he said, to consult the Commander-in-Chief later on "the wide question of the future organisation of the Australian Army and the R.A.A.F. in relation to operations in the South-West Pacific outside the Australian area". The letter ended with a note of appreciation of assurances he had received from MacArthur (on 20th September) that the organisation of the Allied Air Forces into Fifth Air Force and R.A.A.F. Command would have no bearing on the allocation of aircraft for the R.A.A.F. and that "there is nothing involved in the new organisation that will affect the full employment of the R.A.A.F. in active combat operations".

MacArthur, replying on 16th January to Curtin's letter of the 11th, declared:

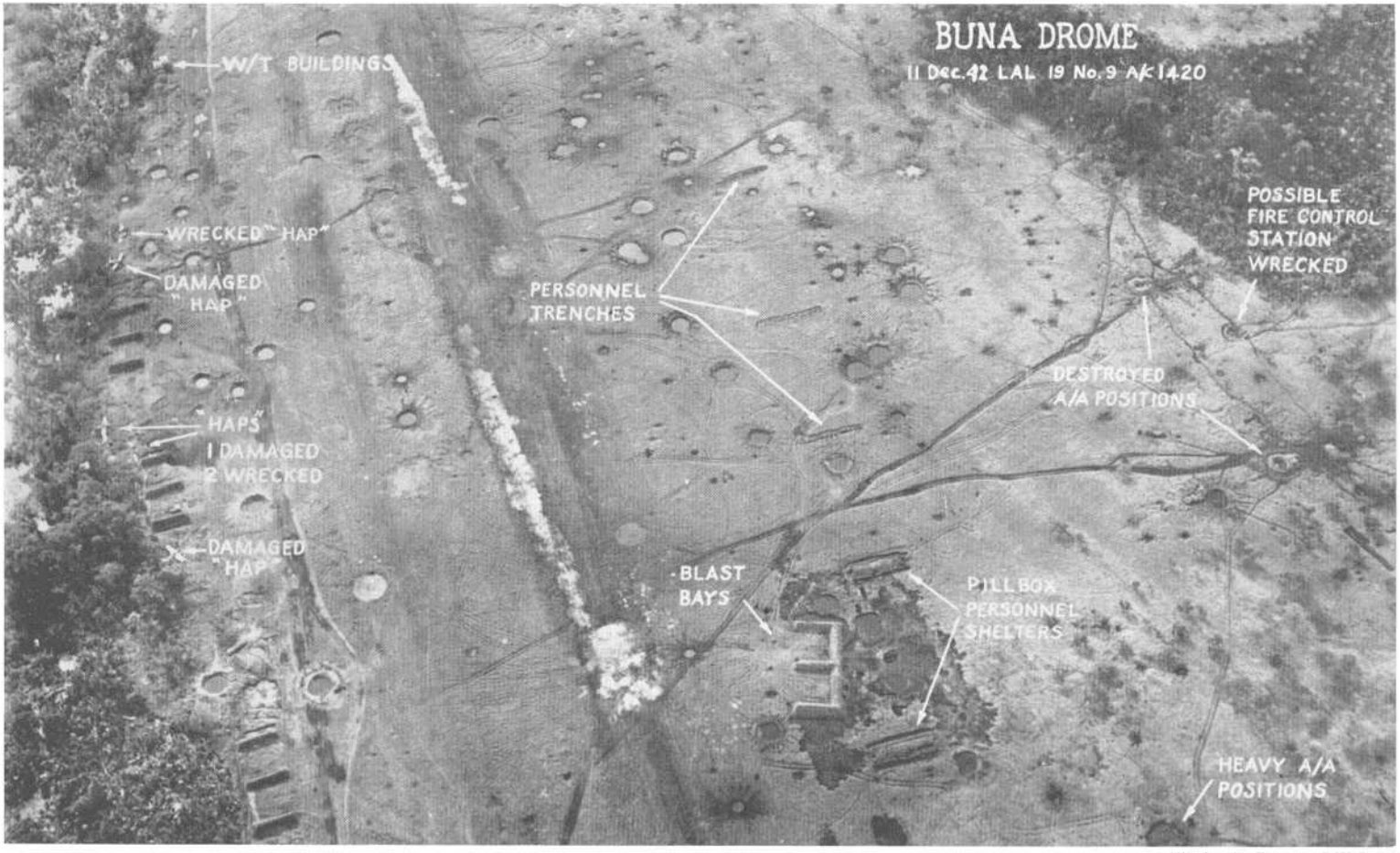
> The basis for the procedure outlined therein [in Curtin's letter] is the proposal to withhold from the senior officer of the R.A.A.F. Command the authority to command that organisation and to give him only operational control thereof. I consider this idea to be completely violative of sound military principles and cannot concur therewith. Australian or American units assigned to the South-West Pacific Area must be actually commanded by officers who are assigned to that area. Administrative control flows down through national command channels, but the command function of the senior officer over his organisation cannot be impaired. 'Operational control' is in fact the military phraseology that describes the condition in which strategical or tactical direction rests in an officer who cannot exercise full command.

The letter went on to outline the organisation of A.A.F.H.Q. and R.A.A.F. Command, and then stated: "It is absolutely essential that the Air Officer Commanding R.A.A.F. Command exercise full and complete command over his organisation and that the Chief of the Air Staff exercise his administrative functions through the chain of command." To achieve this MacArthur requested:

(*a*) That the A.O.C. R.A.A.F. Command have full legal command of his organisation with the responsibilities, authorities and limitations prescribed by regulation and customs of the Service;
(*b*) That the A.O.C. R.A.A.F. Command be provided with the minimum staff necessary to operate and administer his command;
(*c*) That forward service elements essential to the immediate operation of his organisation be assigned to the South-West Pacific Area as a part of R.A.A.F. Command;
(*d*) That communications pertaining to the administration of the R.A.A.F. Command or of its component parts be directed to the A.O.C. by the Chief of the Air Staff.

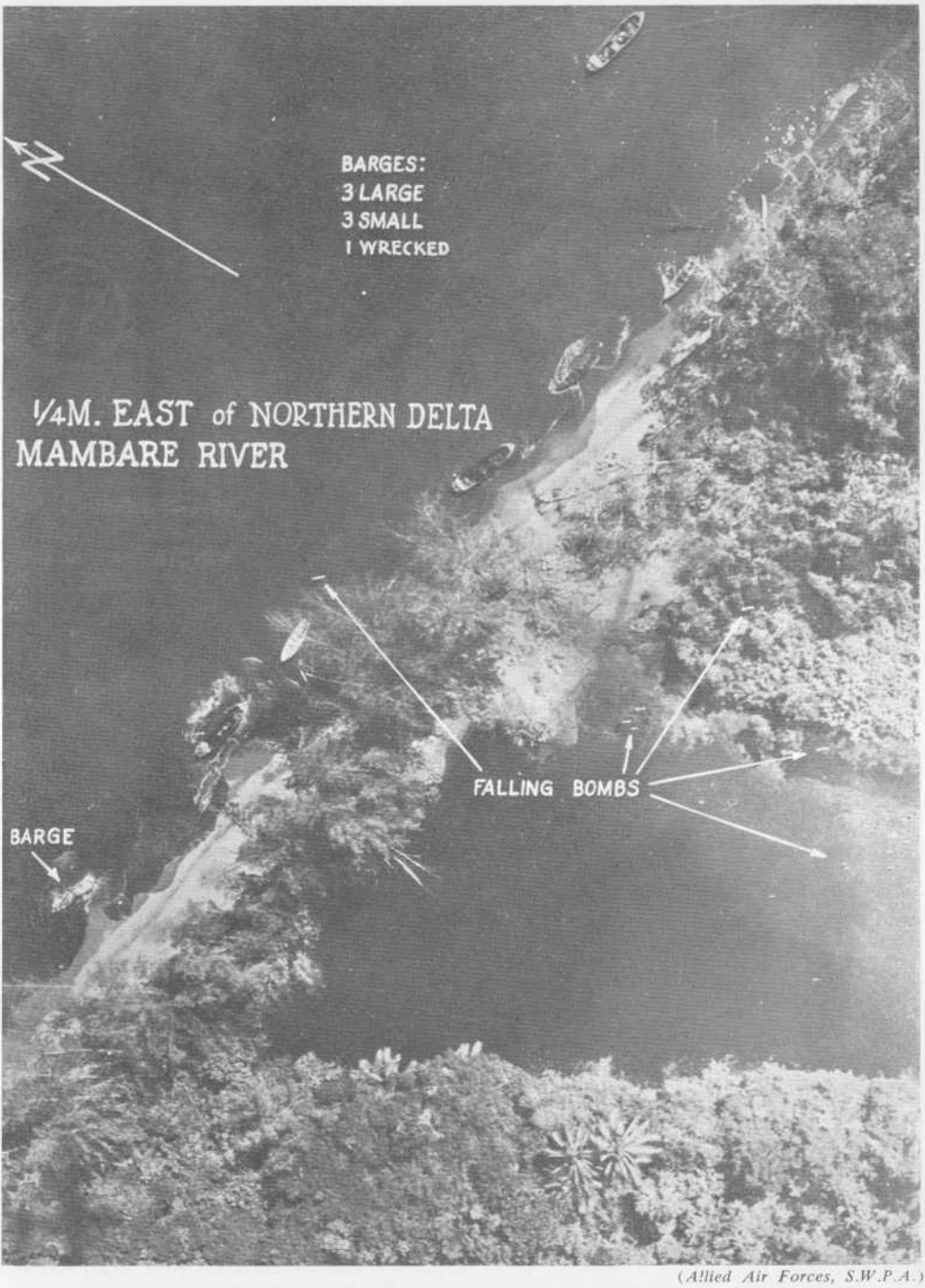
Favourable action in keeping with these requests, MacArthur added, would "have the effect merely to give to the R.A.A.F. Command the inherent structure essential to and present in every military organisation. . . ."

Early in March Bostock sent a memorandum to Kenney complaining that "after a lapse of two months no action has followed the Defence Committee's recommendations". In these circumstances he felt it his



(Allied Air Forces, S.W.P.A.)

Results of the bombing by 9 American Marauders of No. 19 Squadron of Buna aerodrome on 11th December 1942. The attack, in which sixty-three 300-lb demolition bombs were dropped at heights from 4,000 to 1,000 feet, destroyed aircraft, defences and storage dumps, and pot-holed the runway. Fires which were started were visible 35 miles away.



(Allied Air Forces, S.W.P.A.)

In a sustained attack in which Mitchells, Marauders, Bostons, Beaufighters and Kittyhawks of R.A.A.F. and American squadrons took part on 14th December 1942 Allied Air Forces bombed and strafed Japanese positions at the Mambare River delta and adjacent coastal areas. In 22 sorties from 5.20 a.m. to 4.45 p.m. in which 1,946 general-purpose, fragmentation and demolition bombs were dropped and 120,949 rounds were fired from cannon and machine-guns Allied aircraft destroyed and damaged a known 38 barges, knocked out defence positions, set fire to large fuel and munition stores and strafed personnel.

duty to report that "under the existing conditions which circumscribe the scope of my status and authority . . . I am unable to ensure the development of the maximum fighting efficiency of my command". Kenney sent this to MacArthur on 10th March and on the same day MacArthur wrote again to Curtin attaching a copy of Bostock's memorandum and urging that his own recommendations should be adopted. "The basic issue," he told the Prime Minister, "is a military one which does not properly admit of doubt. Reduced to its simplest terms it is that the forces placed at my disposal shall not be vitiated by outside control . . . to deny [this] would produce a situation the gravity of which I cannot over emphasise. May I ask that decisive action be taken. . . ." Curtin told MacArthur in reply (on 17th March) that when he had informed the Commander-in-Chief of the interim measures agreed to by the Defence Committee and Bostock, he had also informed Drakeford and he had since been under the impression that action had been taken. He was disturbed to find that this was not so. Curtin here, for the first time, indicated to MacArthur that the general himself had originally suggested "operational control only", and noted that "full and complete command" for Bostock would involve consideration of the whole question of the future organisation of the R.A.A.F., including the issue of the abolition of the Air Board and the appointment of an air officer commanding the R.A.A.F. He added that he had requested the Minister for Air to issue the necessary instructions for the interim measures and that he greatly regretted the situation that had developed.

MacArthur, in reply, noted that the interim measures proposed would "not of course, satisfy the principles of military organisation" he had outlined in his letter of 16th January. Despite this he felt that recognition by R.A.A.F. Headquarters of R.A.A.F. Command as a tactical formation, and the establishment of R.A.A.F. Command as a unit might tend to facilitate coordination of the administrative services with operational requirements to meet tactical needs. These interim measures, he said, were, however, a poor palliative and he wished to emphasise the vital importance of concluding the deliberations on the future organisation of the R.A.A.F.

Jones' attitude remained unchanged. On 16th March he had sent a signal to all air officers commanding areas which read:

> Communications relating to supply, maintenance, personnel, works and organisation are not to be addressed to R.A.A.F. Command. Such communications may be repeated to R.A.A.F. Command only when they relate to important administrative matters having immediate effect on operations.

Bostock on 19th March sent a copy of this signal to Kenney to whom he complained that Jones was denying him direct access to the combat elements of his command on matters relating to the status of aerodromes, supply facilities and administrative arrangements, except for major matters reflecting on immediate operations, and even then operational headquarters or formations comprising his command were forbidden to reply directly. Information from R.A.A.F. Headquarters was often delayed, out of date,

inaccurate, or incomplete. Jones' latest order, he said, was dangerous and made it impossible to plan operations efficiently "or, indeed, with reasonable hope of success". His appointment was "rapidly becoming impracticable and untenable". Kenney sent this letter to MacArthur with a covering letter in which he said:

> To effect efficiency of control it is essential that the Commander Allied Air Forces must rely on the Air Officer Commanding R.A.A.F. Command as the one responsible officer who represents the R.A.A.F. in all matters affecting the operations of the R.A.A.F. component of the Allied Air Forces. Such matters must necessarily include administration and supply.

Bostock also protested to Jones, asking that the signal, which was "unnecessary and dangerous", should be cancelled. This Jones refused to do. Since the viewpoints of the R.A.A.F's two most senior officers were apparently irreconcilable, Curtin directed Jones to discuss the matter with MacArthur. As a result of this interview Jones wrote to MacArthur setting out his contentions and proposing that if and when a R.A.A.F. expeditionary force left Australia, MacArthur, while continuing to command the South-West Pacific Area, should relinquish his responsibilities for the air defence of Australia to the Chief of the Air Staff. Acknowledging this memorandum on the 25th the Commander-in-Chief wrote briefly but with finality, saying that apparently his basic views had been misunderstood and that the outline submitted by Jones could not be used as a basis for further discussion. He hoped, however, that a clear definition of responsibilities could be arranged.

Thus the problem was discussed, debated and argued and, since none of the participants on either side would concede any ground, it remained unsolved, an irritant to them all and to many others at R.A.A.F. Headquarters and R.A.A.F. Command, who, all too often, were in doubt as to whose was the authoritative voice.

In this issue of divided command—a problem itself as old as is the alliance of independent armed forces—the disagreement between Jones and Bostock had now reached a state of complete obduracy. It was this element more than any other that intensified the ill-effects of what was at best an ill-fitting system of command. When the War Cabinet and the Advisory War Council, on 17th April 1942, had approved the assignment of all combat sections of the Australian forces in the South-West Pacific to MacArthur's new command, they had, with no other practical choice, accepted this system for the R.A.A.F. In this situation, with the Air Board as a composite top-level command authority that was geographically fixed, and operational control separated from administrative control, there were difficulties enough. But these were accepted, if not without some friction at least with realistic understanding and a genuine attempt to cooperate; it was an attitude comparable in some senses with that (already noted) which had been developed within the South Pacific Command. But when the R.A.A.F. was divided, with a separate operational command on the one hand and a R.A.A.F. Headquarters on the other, and when each

of these two elements of the Service was headed by an officer equal with the other in rank, in determination and, as it proved, in inflexibility, the complexities of command became to each of them most exasperating.

Initial responsibility for this second and much more exacting division of authority lay quite clearly with MacArthur. When he outlined the proposed formation of "Coastal Command R.A.A.F." in his letter to Curtin on 4th September, the Commander-in-Chief was most specific in his assertion that the command status of R.A.A.F. Headquarters would remain unchanged. There was not so much as a hint in his letter of the incipient dangers in his proposal. Yet, only four months later, he was writing to Curtin, indulging in an exposition of military doctrine that condemned the immediate and inevitable result of this, his own, direction as "completely violative of sound military principles", and defined operational control as being "the condition in which strategical and tactical direction rests in an officer who cannot exercise full command"—a condition that he himself had prescribed for Bostock.

Curtin, Drakeford and the members of the Air Board were entitled to believe that MacArthur's first assurances were sincerely expressed. Leaving the personalities aside, logic dictated that, in these circumstances, R.A.A.F. Command should be subordinate to R.A.A.F. Headquarters, its air officer commanding, while operationally responsible to the Commander, Allied Air Forces, unhesitatingly acknowledging the authority of the Chief of the Air Staff and doing all in his power to make the best of a difficult situation. R.A.A.F. Headquarters and the C.A.S., for their part should, by the same sensible dictation, have given R.A.A.F. Command just recognition and delegated to its air officer commanding as much administrative power as was compatible with the operational task to be performed.

The Prime Minister, who was also Minister for Defence, had all the constitutional authority he needed to determine the problem, but, the plan to appoint Air Marshal Drummond as Chief of the Australian Air Staff having failed, he felt bound in the absence of any other acceptable nominee to prohibit any decision that might conflict with the pledge of unlimited cooperation he had given to the Commander-in-Chief; insistence on the appointment of an officer regarded by MacArthur as unsuitable would certainly have been in that category. Drakeford's opposition to Bostock, which dated back to his clashes with Burnett, with whose name he had come to bracket that of Bostock, was so strong as to tend to outweigh the influence of Curtin's pledge of cooperation to MacArthur.[2] The members of the Air Board felt that the board was under threat and displayed an understandably strong sense of loyalty to the Chief of the Air Staff.

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[2] The Minister did, in fact, at a later date, support a move by the Air Board, to replace Bostock as AOC RAAF Command. For the details of this incident and of the continuing problem of divided control the reader is referred to George Odgers, *Air War Against Japan 1943-1945* (in this series).

The actual extent to which the R.A.A.F's contribution to the war effort was hindered by the dispute must always remain arguable. It was easy to exaggerate this in an atmosphere of personal bitterness, heated exchange, and reaction to frustration; yet, whatever the degree of exaggeration, the acute personal tension between Jones and Bostock was certainly a serious check on Service efficiency and the cause of a distressing division of loyalties within the R.A.A.F.

Kenney's own attitude, it appears, was that he did not greatly care. "As a matter of fact," he wrote after the war, "except for the feud, which sometimes was a nuisance, I liked the situation as it was. I considered Bostock the better combat leader and field commander and I preferred Jones as the R.A.A.F. administrative and supply head", a statement that did not suggest that any very serious consequences flowed from the dispute.[3] And there was some justification for this point of view. By the end of March 1943, the R.A.A.F. had already made and was maintaining a substantial contribution to the increasingly strong assault on the Japanese perimeter.

[3] Kenney, p. 80. Kenney's admission of preference for the situation "as it was" and MacArthur's subsequent unwillingness to accept a RAF officer as commander of the RAAF suggest that the two American commanders had found a certain convenience in the division of RAAF authority and would not have welcomed the introduction to the command scene of a "strong" man, with considerable operational experience in another theatre, in whom there would be vested greater powers than those held by either Bostock or Jones.

CHAPTER 29

KOKODA AND MILNE BAY

IN mid-August much remained to be done before Port Moresby could claim to be a powerful base. To an observer approaching by air this unreadiness was not immediately apparent. In the absence of raiding enemy aircraft the harbour was a placid enough though busy scene, and the scars of war were scarcely visible in the town itself with its houses and other buildings spilling down to the water's edge. It was the area a few miles inland—acres of stony arid hills and undulating land covered in dry grass with a scattering of meagre gum trees—that gave the real picture. Here there were dark blotches on the land caused by fires started by bursting bombs; dumps of fuel, stores of all kinds and bombs and ammunition; hutted and tented camps, anti-aircraft gun emplacements and slit trenches. The ground was scarred by earthworks, the result of quarrying, aerodrome construction and the making of roads that were now being ploughed by heavy transport into deep furrows of dust.

The work going on at the aerodrome sites was very visibly incomplete. American engineer units that had been at work since May on a variety of tasks were now extending the Seven Mile and constructing satellite fields—Kila, the old town aerodrome; Berry, situated about nine miles north-east of the town; and a third aerodrome about 9 miles north-north-east, to become known as Durand. But none of these satellites was yet ready for operations.[1] As a pointer to the immediate threat, there was a particular road heavily burdened by urgent traffic that reached across the "dry area", and up through the foothills, winding among rubber plantations and rain forest until, about 25 miles from Port Moresby, it reached Ilolo on the far side of the Sogeri plateau. Three or four miles beyond Ilolo this road ended with disconcerting abruptness, its place being taken by a narrow track that plunged steeply into a jungle-filled ravine and became the route to Kokoda and, beyond, to Buna.

These were two place-names that were uppermost in the minds of the defenders of Port Moresby; that of Kokoda more immediately perhaps because, lying in the Yodda Valley on the northern side and virtually in the shadow of the Owen Stanley Range, it had the only aerodrome between Port Moresby and the Japanese-held Buna-Gona area.

By now, after little more than two weeks of bitter jungle fighting, the enemy were not very far away—about 50 air miles from Port Moresby—and there were those, including some who had been in Port Moresby from the beginning of the war and others very recently arrived, who thought dangerously of evacuation. Behind such thinking were the black clouds of Allied defeat in Malaya, Singapore, Java, Burma and, so close at hand,

[1] Within a few weeks No. 5 Mobile Works Squadron RAAF was to arrive and begin the construction of Ward's aerodrome about 5 miles north-east of Port Moresby.

at Rabaul. Here again the Japanese, undefeated since they went to war, were closing in on a vital base. What could stop them? Why would not disaster come again?

To counter these dark thoughts there had come very recently the men of the 21st Brigade of the 7th Division of the A.I.F. which, with part of the 6th Division, had returned to Australia in March from the Middle East. These were now fresh and rested troops, well-trained and battle-hardened. Lieut-General Rowell,[2] commander of I Australian Corps, had arrived in New Guinea with his headquarters on 11th August. Three days later he issued a Special Order of the Day in which he called for the maximum effort adding:

> We are receiving reinforcements of fresh troops and are assured of the greatest possible support from the air force and administrative services. With this aid and your determination to succeed, I am confident that we will achieve satisfactory results.

It was over this scene that 24 enemy bombers flew on the morning of 17th August. There had been a complete respite from air attacks since the 77th raid on 1st August. Now it was broken by 150 bombs dropped accurately and in perfect pattern on the Seven Mile aerodrome. With but four minutes' warning the American fighter pilots did not get off the ground and the enemy formation, despite the anti-aircraft fire, made their attack unscathed. Their bombs demolished the aerodrome control tower and operations hut at the side of the runway, destroyed 5 aircraft and damaged 11 others severely. For the weight of bombs dropped, casualties were comparatively light—one man killed and 13 wounded. A column of dense smoke rising from the burning aircraft was the tell-tale to a lesson expensively learned; the aircraft destroyed and damaged—Marauders and transports—had been parked closely together at one end of the runway, for even the Seven Mile aerodrome was still lacking in revetments. Most serious was the loss of the transports—two Dakotas destroyed and five more so seriously damaged that they had been put out of commission.

It was only very recently that air transport had begun in any substantial way to supplement the work of the over-taxed native carrier lines in supplying the Australian troops fighting in the Kokoda area. Supply dropping sorties had been made over Kagi and Efogi with some success and at a new dropping area, over two dry lake beds which had been named Myola, arrangements had been made to build up reserve stores for this most difficult campaign. The "lakes" which lay on the top of the main range to the east of Kagi were heavily grassed and clear of any obstruction. The area had been first pin-pointed from the air and then confirmed by ground reconnaissance. Rowell had readily appreciated its value for

[2] Lt-Gen Sir Sydney Rowell, KBE, CB. (1st AIF: 3 LH Regt 1914-15.) BGS I Aust Corps 1940-41; Deputy CGS AMF 1941-42; GOC I Corps 1942; Director Tactical Investigation War Office 1943-46; CGS 1950-54. Regular soldier; of Adelaide; b. Lockleys, SA, 15 Dec 1894.

he was only too conscious that in his battle planning a key question was not how many troops he could *move* into action against the Japanese but how many he could *maintain* in action. He was, therefore, deeply concerned over the loss of the Dakotas in the air raid of the 17th. There now was only one of these aircraft in commission. General Whitehead too appreciated how critical the situation had become and, with Rowell's strong support, he sent a signal to General Kenney requesting the urgent dispatch of replacement aircraft. The building of aircraft revetments, too, was now given top priority in the aerodrome construction program. Meanwhile efforts were made to develop supply dropping at Myola, an experimental drop having been made there on 5th August.

This effort, it was thought, would quickly build up the reserve of supplies so sorely needed. But it was Brigadier Potts,[3] commander of the 21st Brigade, who was to prove that the supply situation was even more critical than either Rowell or Whitehead realised. To Potts it was of first importance to know precisely how his troops were to be supplied *before* he led them into battle. He therefore made an exacting personal reconnaissance from which he discovered, on 21st August, that the reserve of supplies he had been told had by now been delivered to Myola did not exist. The quantity in hand was completely inadequate and, understandably, nothing at all had been dropped since 16th August. As seen from the viewpoint of New Guinea Force Headquarters the situation was that although the

> . . . discovery of Myola had given rise to high hopes that aircraft might be used to carry the main burden of supply, Potts had now revealed that the performance had fallen far short of hopes. Nevertheless it was clear to the men on the spot that only aircraft could save the situation for the carriers clearly could not carry the load required. General Rowell soon afterwards told General Blamey that the daily maintenance requirement of Maroubra Force was 15,000 pounds (and that of Kanga Force 5,000 pounds). To meet the Maroubra Force requirements, with native carriers on a basis of a six- to eight-day carry of a maximum of 40 pounds a native, would necessitate the use of at least 3,000 carriers, without allowing for the porterage of their own rations, wastage among them, and other possibilities. Unless this number could be greatly increased the forward force could not be strengthened nor could even the smallest reserve of supplies be built up. But Rowell wanted to build up 20 days' reserves and that would require the transport of 200,000 pounds more of rations and ammunition. Such a carry, spread over 20 days, would demand the use of at least an additional 2,000 natives and still would not allow for any increase in the strength of the force. Clearly the entire Australian operations in the Owen Stanleys would bog down completely unless effective alternative or supplementary means of supply could be found.[4]

Rowell had been planning on an assurance that supplies and ammunition sufficient for the needs of 2,000 men for 25 days had been delivered

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[3] Brig A. W. Potts, DSO, MC. (1st AIF: Capt 16 Bn.) CO 2/16 Bn 1941-42; comd 21 Bde 1942, 23 Bde 1942-45. Farmer; of Kojonup, WA; b. Peel, Isle of Man, 16 Sept 1896.

[4] D. McCarthy, *South West Pacific—First Year* (1959), p. 197, a volume in the army series of this history.

to Myola by 16th August. Potts had disproved this. Rowell, having confirmed Potts' statement, reported:

> The closest inquiry disclosed that the rations . . . had in fact been dispatched from Moresby and it can only be assumed that, from causes unknown, they were dropped elsewhere than at Myola and were not recovered.

The immediate outcome of this situation was that Potts sought 800 carriers and was told that only 300 could be spared. He therefore did not dare to advance his brigade even as far as Myola before the supply position had been remedied. Rowell, accepting this as inevitable, ordered (on the 24th) the withdrawal of the 39th Battalion, then at Isurava, as soon as possible, so that the supply position might be eased, and gave further instructions that this unit should make no offensive movement before reserves sufficient for its needs for 30 days had been stored at Myola. Rowell's plea for replacement aircraft brought the reply from General MacArthur (through Blamey) that six Douglas Dauntless dive bombers, one Flying Fortress and two transports would be made available for service from Port Moresby. The Commander-in-Chief's message added:

> With these planes it is estimated that a minimum of 20,000 pounds of supplies per day can be delivered to Kagi and Wau. There are available in Australia only thirty transport planes at the present time. Of these an average of not more than 50 per cent are available at any one time. Air supply must necessarily be considered an emergency rather than a normal means of supply. Consequently every effort should be made by the GOC, NGF, to develop other means of supply.

Even then MacArthur's message did not reveal all the complexities. Air dropping to Myola, Kagi and Wau could not provide the full answer —supplies must as yet be carried forward from those points on men's backs. There were, too, the ever-present worries caused by the weather, flying conditions and aircrew fatigue. These factors limited the number of daily flights of a single aircraft to two to Kanga Force headquarters and three to Myola. Fighter cover had to be arranged and bad weather, accident or damage and loss from enemy air attack could critically restrict air operations, as the enemy raid on the 17th had proved so drastically. But one of the most difficult and frustrating aspects of the air supply problem was created by lack of information about the course of the battle. Communications with the forward troops often depended on whether runners succeeded in eluding the enemy; and in the changing fortunes of the battle, messages were often outdated before they reached headquarters. Thus late in July Australian troops who, having been forced back from Kokoda and then fought a bitter but successful action to retake it, had watched in dismay while two Allied transports bearing desperately needed reinforcements and supplies circled the aerodrome and then turned back thinking it was in enemy hands; the Australian troops were unable to remove in time the obstacles they had placed on the runway before retiring or to signal to the aircraft that they had recaptured the place.

Meanwhile Whitehead, now the senior air commander in New Guinea, had set up his headquarters with a minimum of attention to personal amenities for himself. This typified his forthright, hard-driving, single-minded outlook which he expressed verbally in the forceful precept: "The objective in war is to kill the enemy and destroy his equipment."[5] This he had already begun to translate into action but the task had many difficulties. Working from directives received from Kenney's headquarters in Brisbane, he had to plan the detail of attacks with aircraft dispatched to him from mainland bases by General Walker who, in turn, was obliged to confine his attention to the administration of his command and prepare his aircraft for service "on call".

To give effective air combat support to the Australian troops fighting on the south-western side of the Owen Stanley Range was extremely difficult. The opposing ground forces were fighting a series of miniature but fierce battles the pattern of which was interlaced with sharp patrol clashes, encircling movements and unpredictable advances and withdrawals all of which made extremely complex the task of passing target information to the squadrons. It was hidden warfare. Fighter pilots and bomber crews quite frequently operated without any clear view of what their attacks were achieving. There was also the constant strain of flying and fighting in narrow gorges between densely jungle-clad or rock-faced and often cloud-covered mountains; among what aircrew graphically described as "clouds full of rocks".

More easily planned and carried out were attacks on enemy positions and communications on the north-eastern side of the mountains. Here, in more open country, reaching to Buna and Gona, it was possible to see results. Yet the battle itself was still in the mountains and that was where air support was urgently needed. But the profit from the suppression of the enemy's air units at Lae and Salamaua was increasingly apparent and in their operations in support of the Australian ground troops the Allied air units now held a marked superiority.

The Milne Bay base—the bay's name was quickly adopted for the Gili Gili site at its head—was still very much in its physical beginnings when its defence importance was heavily underlined by the arrival of two R.A.A.F. fighter squadrons. First to reach the base was the main party of No. 76 (Kittyhawk) Squadron which had been formed at Townsville as recently as April and which had made the voyage by sea in July under the command of Wing Commander Thomas. Thomas, who had been R.A.A.F. liaison officer with Abdair Headquarters during General Wavell's brief period of command in Java, was now to become the senior R.A.A.F. officer at Milne Bay. The squadron's aircraft were flown in to the raw jungle base on 25th July, and on the same day arrived those of No. 75 Squadron, which had taken the first impact of the Japanese air assault

[5] United States Strategic Bombing Survey, *The Fifth Air Force in the War Against Japan* (1947), p. 75.

on New Guinea, and, now re-equipped and refreshed, was still under the command of Squadron Leader Leslie Jackson.

No. 76 Squadron had a nucleus of pilots who had returned from overseas with distinguished combat records. Squadron Leader Turnbull, who had fought in the Western Desert and Syria, was chosen as its commander. A strong and capable leader, Turnbull gained the immediate respect and admiration of the unit. Unlike No. 75, which had drawn its battle-experienced nucleus from the Middle East, No. 76 had received several pilots who had seen combat over Britain and France. It was not until shortly before the squadron moved to Milne Bay that these additional pilots arrived—Squadron Leader Truscott,[6] Flight Lieutenant Wawn[7] and Flying Officers Tainton[8] and Elphick,[9] all from No. 452 Squadron. Though it was only one year older than No. 76, No. 452 already had a considerable battle reputation, a reputation with which Truscott who, on 25th January had succeeded another notable Australian, Squadron Leader Bungey,[1] as its commander, had become personally identified. On the night before Truscott and his companions arrived, the conversation in No. 76 Squadron's mess at the Weir aerodrome (a satellite of Townsville's main aerodrome, Garbutt) centred on what was known of the newcomers and particularly of Truscott. Already the unit had begun to achieve the paradox that was true of all good fighter units, a collective individualism—a tight unity among men who fly as individuals and yet learn to fight as a team. In spite of the usual high-spirited nonsense that accepted "shooting a line"—making a boast so outrageous that it was funny—there was a resentment, common in the Services, against anyone who sought personal publicity, which was classed as one of the least forgivable of human weaknesses. Judged by these standards Truscott's prospects for ready acceptance in this mess were most unpromising. Few if any of the pilots knew him personally but all had come to know of him as one of the most highly publicised members of the R.A.A.F.

Immediately before the war and even after he had joined the R.A.A.F., Truscott was a prominent football player in Melbourne and as such he had become a public idol. The period before his graduation as a pilot had been one filled with grave fears both for himself and his instructor, but he was passed as competent and was soon commissioned ahead of many of his fellow trainees, most of whom had better flying qualifications than his. Truscott's potential quality was assessed as being more than sufficient to make up for his early ineptitude as a trainee pilot. He

[6] Sqn Ldr K. W. Truscott, DFC, 400213. Comd 452 Sqn 1942, 76 Sqn 1942-43. Clerk; of South Yarra, Vic; b. Prahran, Vic, 17 May 1916. Killed in aircraft accident 28 Mar 1943.

[7] F-Lt C. N. Wawn, DFC, 400163. 111 and 92 Sqns RAF, 452 and 76 Sqns. Grazier; of Langkoop, Vic; b. Melbourne, 5 Nov 1910.

[8] F-Lt E. B. Tainton, 402009. 452 Sqn, 607 Sqn RAF and 76 Sqn. Wool appraiser; of Double Bay, NSW; b. Sydney, 23 Sep 1919.

[9] F-Lt J. R. H. Elphick, 402157. 111 Sqn RAF, 452 and 76 Sqns, 113 and 115 Air-Sea Rescue Flights. Bank clerk; of Lismore, NSW; b. Cootamundra, NSW, 28 Feb 1919.

[1] W Cdr R. W. Bungey, DFC, 40042 RAF, 257414. 226, 79 and 145 Sqns RAF; comd 452 Sqn 1941, RAF Stns Shoreham and Hawkinge 1942. Regular air force offr; of Glenelg, SA; b. Fullarton, SA, 4 Oct 1914. Died 10 Jun 1943.

went on to prove this judgment to be sound; he was to achieve unusual success as a fighter pilot in the skies over Britain and France.

On his return to Australia where, in Melbourne at least, he was now doubly idolised by the public, he became a leading figure in a test case that was of interest to the whole air force and particularly to those who, like himself, were called on to surrender their higher acting rank (and the higher pay for that rank) on return from an overseas posting. Although others were equally involved, Truscott was once more the centre of public attention. So strong was the popular clamour for the restitution of acting rank held by men who had become "veterans" in combat that the Minister for Air, Mr Drakeford, ordered the retention of acting rank in such circumstances.

In those early days of its development the Milne Bay base was notable with the troops more for its heavy rainfall than for any other reason. When the Kittyhawk pilots flew in, the one completed runway, No. 1 Strip (later to be known as Gurney[2]) was virtually under water. Interlocking steel matting laid over its 5,000 feet length to a width of 80 feet, alone made landing possible.[3] The pilots, few if any of whom had landed on such a runway, touched down with their aircraft spraying water like so many hydroplanes. On landing the aircraft skidded, often so violently that they swung off the runway and became bogged in the morass at the side of the matting. The ground staff and all others who could help laboured in deep mud, dragging out bogged aircraft to what firm ground there was and laying further sections of steel matting for taxiways to the dispersal areas among the coconut plantations. The original plans for the base had not provided for a force as large as that now being assembled, and it had been intended that initially only one fighter squadron should be based at Milne Bay.[4]

Despite these limitations the emphasis on air facilities was now urgent, and with the arrival on 7th August of additional American engineers, the construction of further air strips became possible.[5] A site for No. 2 Strip was selected at Waigani to the south-west of No. 1 Strip, but its construction and use would entail considerable bridge-building and one company of the newly-arrived American troops was put to work on the preparation of No. 3 Strip, sited to the east of No. 1 with the runway laid out in a west-north-westerly direction from the bay-front to the west of Kilarbo.[6] Wing Commander Thomas now had under his control the two fighter squadrons with their ground staffs, a radar unit (No. 37), a signals section, a mobile torpedo unit (established in preparation for operations by

[2] Gurney airfield was so named in commemoration of Sqn Ldr C. R. Gurney, a former Qantas flying-boat captain, who served first with No. 11 Sqn and later became commanding officer of No. 33 Squadron. He lost his life when an aircraft crashed on 3rd May 1942.

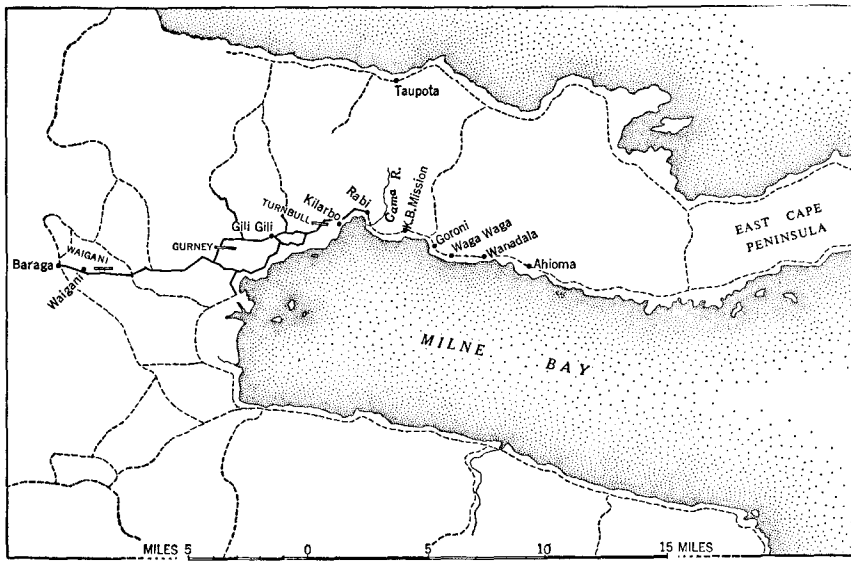
[3] Known as "Marsden" matting, this American device was one of the most notable material contributions to the Allied effort in the early years of the war.

[4] By 8th August 1942 this force—all arms and services—numbered 6,212 officers and men.

[5] The additional engineer troops were the II Battalion, 43 US Engineer Regiment, less one company.

[6] No. 3 Strip was later developed and named Turnbull after the commander of No. 76 Squadron.

the Beauforts of No. 100 Squadron) and an operational base staff. Camp facilities for these units were seriously inadequate but in spite of many difficulties progress was being made towards establishing the base on an operational footing. The signals unit was ready to operate point-to-point communications over the 700 miles that separated Milne Bay from Townsville but security dictated that this channel should not yet be used and



the army signals service operating through Port Moresby was preferred. This precaution, and strict instructions to pilots to maintain radio silence, probably explained the entire freedom from enemy air attack in the first two weeks of occupation. At Brigadier Field's[7] request Thomas was appointed air liaison officer at Milne Force Headquarters, a role in which he laboured to reduce the congestion at the base and to plan air cover and air support to meet the army's needs.[8] Army liaison officers were appointed to assist the squadrons in achieving tactical cooperation.

On the night of 25th July, the day the Kittyhawks arrived, the first "Form Green" (attack order) was received. The Kittyhawks were to take off early next morning in an endeavour to intercept the flying-boats that had raided Townsville as they were on their way back to Rabaul. The attempt was made, but there was no interception. In addition to the many tasks they wrestled with under exacting conditions in which the principal ingredients were mud, rain and intense humidity, the ground

[7] Brig J. Field, CBE, DSO, ED. CO 2/12 Bn 1939-42; comd 7 Bde 1942-45. Mechanical engineer and university lecturer; of Hobart: b. Castlemaine, Vic, 10 Apr 1899.

[8] The problems of authority for air force organisation and administration at Milne Bay—the allocation of camp areas, provision of supplies and rationing—were acute and Field was too burdened with his own staff work, and too ill-equipped in terms of authority, to deal effectively with them.

staff worked to provide better protection for the aircraft. Using the trunks of coconut trees that had been cleared to make the runway, they began to build splinter-proof pens round what dispersal bays there were.

The first opportunity for fighter combat came on 4th August when four Zeros and a dive bomber, presumably making an armed reconnaissance of the Allied base, ended Milne Bay's freedom from air attack. Since the radar station was not yet in full service there was practically no warning, but No. 76 Squadron had eight Kittyhawks on patrol. The Zero pilots attacked the No. 1 Strip with gunfire and succeeded in destroying one of No. 75 Squadron's aircraft on the ground. Several of the Kittyhawk pilots engaged the Zeros. Flight Lieutenant Ash[9] of No. 76, returning from patrol, intercepted and shot down the dive bomber which crashed into the jungle. Ash thus destroyed the first enemy aircraft over Milne Bay and scored the squadron's first success in combat.

From this time on the radar station was in operation and the enemy did not again raid the base without warning. Kittyhawks took off on 7th August to attempt the interception of enemy aircraft reported over Samarai. Through inexperience five pilots of No. 76 Squadron were airborne so long in their search for the enemy that they were forced by fuel shortage to land on an emergency strip on Goodenough Island, 57 miles to the north across Ward Hunt Strait. One aircraft crashed on landing and had to be written off. Until they could be brought off the island the five pilots were kept supplied with rations dropped from the air.

Raid No. 2 occurred soon after midday on the 11th. After a warning from the radar station, Nos. 75 and 76 Squadrons had between them 22 aircraft airborne to meet a force of about 12 Zeros. Although they had marked superiority in numbers the Kittyhawk squadrons paid a heavy price for the inexperience of some of their pilots. Details of the combat are somewhat confused. Two pilots from No. 75—Flying Officer Sheldon[1] and Warrant Officer Shelley[2]—and Flying Officer McLeod[3] of No. 76, were missing when the combat ended. Flight Sergeant Inkster,[4] also of 76 Squadron, lost his life after a fierce encounter while attempting to parachute at low level from his wrecked aircraft. Four Zeros were probably shot down by the Kittyhawk pilots. The squadrons were to wait almost a fortnight before the enemy returned to the attack.

The arrival on 12th August of advance parties of the 18th Brigade of the 7th Division A.I.F., under Brigadier Wootten,[5] had greatly stimu-

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[9] Sqn Ldr P. H. Ash, 260771. 21, 23, 76 Sqns; 2 OTU and Fighter Sector Darwin. Company director; of Newcastle, NSW; b. Newcastle, 26 Mar 1909.

[1] F-O M. E. Sheldon, 402256. 17 and 134 Sqns RAF and 75 Sqn. Building contractor; of Eastwood, NSW; b. Granville, NSW, 19 Nov 1914. Killed in action 11 Aug 1942.

[2] W-O F. P. Shelley, 402408. 41 Sqn RAF. 452 and 75 Sqns. Bank officer; of Double Bay, NSW; b. Branxton, NSW, 8 May 1919. Killed in action 11 Aug 1942.

[3] F-O A. G. McLeod, 411807; 76 Sqn. Commercial traveller; of Bexley, NSW; b. Bexley, 30 May 1918. Killed in action 11 Aug 1942.

[4] F-Sgt G. F. Inkster, 402292. 64 Sqn RAF and 76 Sqn. Theatre operator; of Eastwood, NSW; b. Leichhardt, NSW, 3 Oct 1915. Killed in action 11 Aug 1942.

[5] Maj-Gen Sir George Wootten, KBE, CB, DSO. (1st AIF: 1 Bn and BM 11 and 9 Inf Bdes.) CO 2/2 Bn 1939-40; comd 18 Bde 1941-43; GOC 9 Div 1943-45. Solicitor; of West Wyalong and Mosman, NSW; b. Marrickville, NSW, 1 May 1893.

lated the Milne Bay defences, as did the announcement on the same day that Major-General Clowes[6] had been appointed to command Milne Force which was to be augmented by Wootten's whole brigade. The appointment of Clowes, who arrived at Milne Bay on the 13th, was in keeping with the whole reorganisation of Australian Army forces in New Guinea presaged by the arrival of General Rowell at Port Moresby. By 22nd August Clowes had 8,824 army troops under his command including 1,365 Americans, principally engineer units, but only about half the total were infantry.

The sum of Intelligence reports received by General Headquarters now left no doubt that the Japanese were about to make another major assault. By 17th August there was sufficient evidence for Allied Air Headquarters to issue orders to all combat elements to prepare for a maximum effort between the 22nd and the 27th. This enemy effort, the orders stated, might be directed against the American forces in Guadalcanal, but it was essential that the Allied forces concerned should be ready for attempted enemy landings at Goodenough Bay, Milne Bay or Port Moresby.[7] At Milne Bay, therefore, air patrols were increased and, despite the mud and other physical difficulties, modifications to convert the Kittyhawks into fighter-bombers were made in haste. The need for additional long-range armed reconnaissance aircraft for the area was emphatic and No. 6 Hudson Squadron was moved from Richmond, New South Wales, to Horn Island on 23rd August. It was placed under the immediate control of No. 9 Operational Group and under Advon (Advanced Echelon) Fifth Air Force for operational orders; a detached flight being sent immediately to Milne Bay. Reconnaissance facilities were still far from liberal and more observers were posted on outlying islands to fill the gaps in the visual warning system.

On the 24th an observer on Cape Nelson at the northern entrance to Ward Hunt Strait which separates the D'Entrecasteaux Islands from the Papuan "tailpiece", gave first warning of an amphibious operation by the Japanese. Seven enemy barges were reported to be moving down the coast past Porlock Harbour in the direction of Milne Bay. The Kittyhawk squadrons were prevented from an early attack on the barges by an enemy air raid on No. 1 Strip area. Seven Zeros made strafing runs without effect and then made off under cover of cloud. Three were believed to have been shot down.

At midday on the 25th, in response to a report that the barges had put ashore on the western coast of Goodenough Island, nine Kittyhawks from No. 75 Squadron crossed Ward Hunt Strait in two flights, one led by Flying Officer Piper and one by Flying Officer Atherton. While one flight acted as top cover the other flew in at low level and attacked the beached barges with gunfire. After six runs had been made over the target

[6] Lt-Gen C. A. Clowes, CBE, DSO, MC. (1st AIF: 2 Bty and 2 Div Arty.) CRA I Corps 1940-41; GOC 1 Div 1942, NG Force and Milne Force 1942, 11 Div 1942-43; Comd Vic L of C Area 1943-45. Regular soldier; of Warwick, Qld; b. Warwick, 11 Mar 1892.

[7] AAFHQ Operations Instruction No. 22, 17 Aug 1942.

all seven barges were blazing. The craft were about 50 feet long and 10 feet in beam, and laden with equipment. Few troops were visible. The nine Kittyhawk pilots, who had not been intercepted, all flew safely back to their base with the satisfaction of having seen a column of smoke rising 1,000 feet from the demolished enemy craft.

With the enemy's main force, now known to consist of two cruisers, three destroyers, two submarine chasers and two transports, approaching Normanby Island, all units of Milne Force were placed on the alert. Since the area was now under threat of invasion, Clowes, in keeping with his directive, assumed command of all Allied land and air forces. It remained for him to endeavour to anticipate the enemy's specific intentions. The bay itself, shaped like the blade of a spade, extends from its seven-miles-wide entrance at the very eastern extremity of Papua, in a westerly direction for about 20 miles. The main Allied base at Gili Gili was close to the north-western corner of the bay, the shores of which offered ample scope for choice in landing points, its deep waters permitting transports to stand relatively close inshore. Clowes assigned a virtually static role in the eastern sector to the inexperienced troops of the 7th Brigade and held the battle-hardened 18th Brigade in the Gili Gili-Waigani area ready for a mobile, counter-attack role.

For their part Allied Air Headquarters had ordered all reserve aircraft to be prepared for attack sorties. No. 19 Bombardment Group at Mareeba had nine Flying Fortresses standing by and all available Mitchells and Marauders were moved to Port Moresby. Even Nos. 2 and 13 Squadrons in the Darwin area were ordered to be ready to move to New Guinea if needed. One completely uncontrollable element of great importance to both the Allied and and the enemy forces was the weather. It favoured the enemy. On this critical day the heavy-bomber crews failed again to check the advance of an enemy seaborne force. Flying Fortresses sortied but their crews, unable to find the enemy ships, returned with the bombs still in their racks.

Group Captain Garing was now personally directing the operations of the R.A.A.F. squadrons which were being "bombed up" in readiness for an attack when the enemy force should come within range. At 3 p.m. on the 25th, when the Japanese convoy had reached a position just south of Normanby Island, the decision to strike was made. Six Kittyhawks from No. 75 Squadron led by Flying Officer Brereton attacked the convoy each dropping a 300-lb bomb but without success. The Kittyhawks were operating in company with the Hudsons the crews of which were so continuously airborne and now so competent in target finding that they were creating something of a legend.

One of the Hudson crews attacking what they took to be a corvette (probably a submarine chaser) at little more than mast-top height scored a near miss that damaged the ship which lost speed. Between 4.40 and 5.30 p.m. six Kittyhawks of No. 76 Squadron carrying 300-lb bombs and three more Kittyhawks from No. 75 carrying 250-lb bombs again

attacked the convoy, scoring two near misses on a transport and a direct hit on a corvette (probably the one mentioned above) which stopped and did not follow the convoy into Milne Bay. The aircraft landed by the aid of a flare-path that could be seen through the darkness and mist only when they were circling low over the runway. All the aircraft but one returned safely. The missing pilot, Flying Officer Whetters,[8] was given up as lost, but later he was rescued from Sideia Island to the south of the entrance to Milne Bay. Two of the Hudson crews, their aircraft holed by enemy anti-aircraft fire, were unable to reach Milne Bay in the darkness and overcast. They flew on to Port Moresby, returning next day.

At 6 p.m. a Hudson of No. 6 Squadron piloted by Pilot Officer Law[9] and another Hudson from No. 32 Squadron attacked the convoy from 100 feet. Law dropped 7 bombs the nearest of which landed 10 feet from the side of an 8,000-ton transport. Intense anti-aircraft fire of all calibres from all the ships was experienced and Law's aircraft was hit in the port fuel tank and received other shrapnel damage but returned safely to base.

Soon after midnight (the morning of the 26th) Clowes and Garing received a report that the Japanese convoy had entered Milne Bay. The report came from the crew of a R.A.A.F. crash tender which was patrolling the bay at Clowes' direction. About an hour later the defenders heard the sound of gunfire coming from seaward and, by 1.30 a.m., patrols reported that Japanese troops were landing from barges at points just to the east of the 7th Brigade's most forward positions, close to the K.B. Mission, and at other points—Waga Waga, Wanadala and Ahioma. There was little sleep for the Milne Bay defenders that night, as ground staff and aircrew slaved in the mud to prepare the Kittyhawks for the next day's battle.

Reconnaissance at first light showed that the enemy convoy had disembarked its troops and their equipment, using about fifteen powerful steel barges which now lay moored inshore at the landing points, and had dumped a large number of drums of petrol into the water just off shore where most of them still floated. Having completed their task before dawn the ships had withdrawn unimpeded, and, while it was yet dark, had vanished out to sea, once more protected by a curtain of cloud. The Japanese had landed without opposition on a narrow strip that skirted between the foot of the mountain range and the shore. There was some sporadic fighting between the Australian and Japanese forward patrols in the darkness of the early morning, but on both sides the troops were feeling their way. For the enemy that way lay westward along or in the direction of the one boggy, unformed earth road that traversed the low-lying coastal ledge. This road ran along the north shore of the bay from Ahioma, past K.B. Mission and Rabi and then turned southward round the bay's head to Gili Gili where the level land opened out somewhat. Until the Gili Gili coconut plantation area was reached, the route

[8] F-Lt W. A. Whetters, 3403. 75, 76 and 86 Sqns; EO 2 OTU and RAAF HQ 1943-45. Regular airman; of Canterbury, NSW; b. Melbourne 5 Jul 1912.

[9] F-Lt M. S. Law, 403933. 7, 32 and 6 Sqns. Company director; of Haberfield, NSW; b. Sydney, 19 Jul 1914.



(*R.A.A.F.*)

A Vultee Vigilance light aircraft, used as an air ambulance, being reclaimed after a forced landing at Kapari Hula, 70 miles south-east of Port Moresby. Salvage work carried out by No. 6 Repair and Salvage Unit required fitting a new airscrew and repair of a broken undercarriage and fuselage damage. Parts were taken down the coast by R.A.A.F. crash launch and were then carried to the site by Papuans, who are here seen clearing a strip whence the aircraft was flown out by P-O C. L. Dangerfield of No. 33 Squadron on 22nd December 1942.



(*Australian War Memorial*)

A crew of No. 4 Tactical Reconnaissance Squadron, Flying Officers N. B. S. Hutchinson and N. A. Jobson, resting at an advanced post during the operations against the Japanese at Buna.



(*R.A.A.F.*)

Lae airfield on 4th January 1943 from 12,600 feet. The number and variety of aircraft seen, which include Betty heavy bombers, Vals (attack bombers) and Zero fighters, and the quick repair of the runway in spite of continuous attacks, show the importance of this base to the Japanese. Many of the aircraft to the left of the runway and others in the right centre and foreground are shattered wrecks.



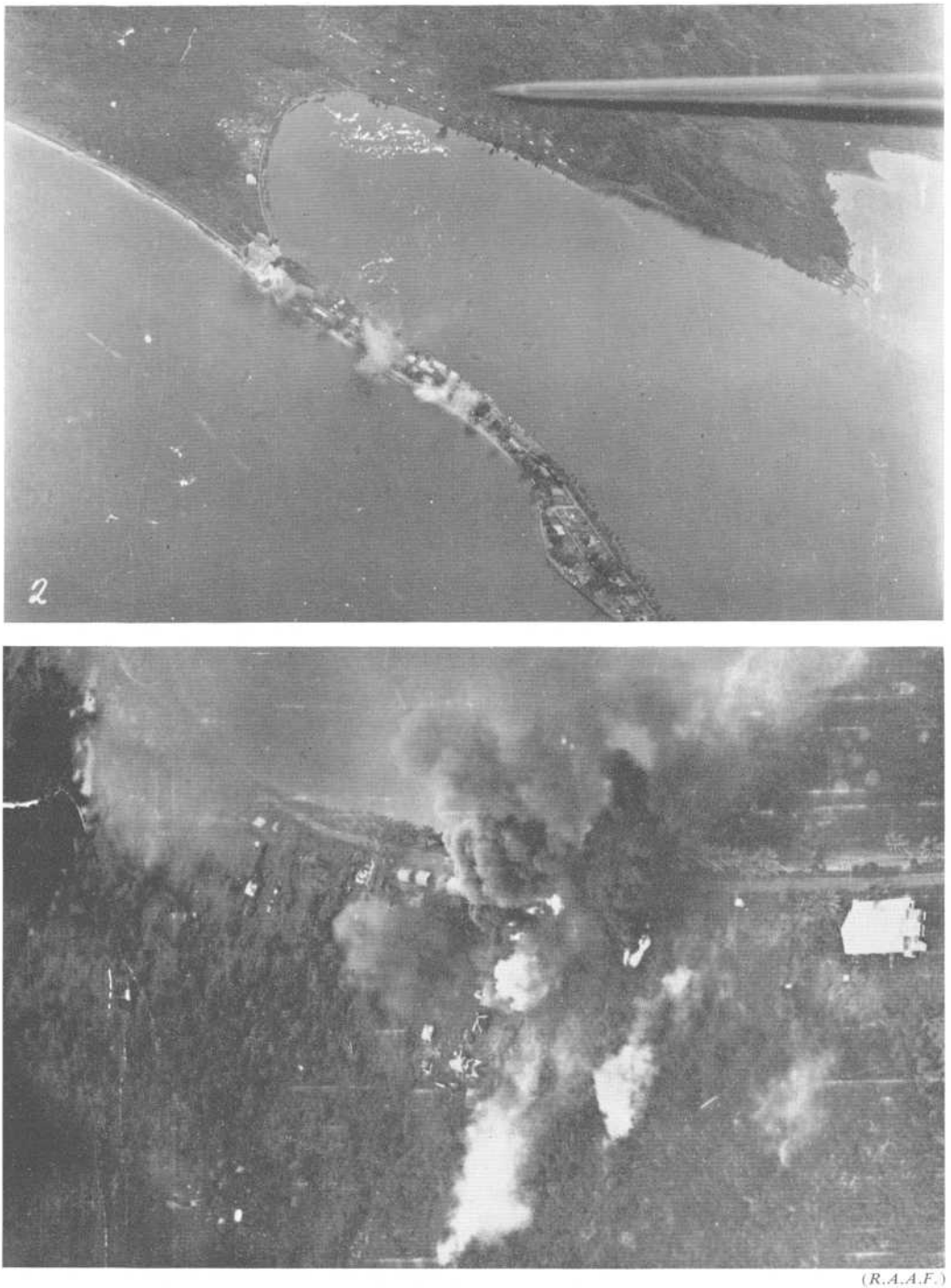
(*Australian War Memorial*)

A Wirraway of No. 4 Squadron blasted and set on fire by a near-miss in the Japanese raid on Wau on 6th February 1943. The crew, F-Sgt A. Rodburn and Sgt A. E. Cole, had scrambled from the aircraft and thrown themselves flat on the ground only a few seconds earlier. Cole received a minor shrapnel wound in the shoulder.



(*R.A.A.F.*)

A Hudson aircraft over Dobo, a Japanese float-plane base in the Aru Islands, in March 1943. During this month both Nos. 2 and 13 Squadrons, in conjunction with the Beaufighters of No. 31 Squadron and the Mitchells of No. 18 (Netherlands) Squadron, made a concerted effort against Dobo and other Japanese bases in the Banda-Arafura Seas area.



(*R.A.A.F.*)

Two attacks on Salamaua by Bostons of No. 22 Squadron early in 1943. The attack in the upper photograph carried out at the comparatively high level of 15,000 feet, on 21st January, was aimed at installations on the isthmus. The lower photograph shows the attack on 16th March, carried out at low level and led by F-Lt W. E. Newton, against stores buildings, gun emplacements and two newly installed 40,000-gallon fuel tanks which can be seen blazing under a pall of smoke. Newton was awarded the Victoria Cross for a series of such attacks at this time.

was covered for the most part by dense secondary growth. The ground was sodden from intermittent rainstorms and the drainage from the mountains that crowded close to the bay's edge.

With the target area thus defined the Kittyhawk pilots, with the Hudson crews joining in, began taking off soon after dawn. Bomb explosions and frequent bursts of cannon and machine-gun fire, joining with the roar of aircraft engines, could be heard from the runway from which the aircraft had taken off. Probably never before had squadrons been based so close to troops in action: this was airborne artillery in its most literal sense. The most immediate targets were the barges at the shore's edge. Cannon fire and bombs ripped and tore them so that all were sunk. Flight Lieutenant Yeowart flew his Hudson in a shallow dive to bomb fuel drums in the water. Two of the bombs hit the drums and started a huge fire. Piper dived his Kittyhawk at a truck the Japanese had put ashore and strafed it; it was laden with ammunition and blew up. A number of enemy troops were killed on the foreshore. Milne Force headquarters endeavoured to guide the aircraft to the targets but for the most part the results of the attacks could not be seen. Throughout the day the air barrage continued. No. 75 Squadron alone made 26 sorties in the day, each aircraft firing from 1,400 to 1,500 rounds on each sortie. Jackson led two of the five attacks and Piper led two. The destruction of the barges was assessed by Clowes as highly valuable since it prohibited the enemy from adopting the tactics, used so effectively in Malaya and elsewhere, of bypassing the defending troops in amphibious "loops" along the coast. The loss of the barges also denied their use for further ship-to-shore ferrying. That night, as the enemy pressed slowly forward, the Australian troops fell back towards Rabi.

Earlier in the day a formation of Flying Fortresses, staging from Mareeba through Port Moresby, had succeeded in finding the retiring Japanese convoy. In a bombing attack a transport was severely damaged (it was thought to have been sunk but this was not confirmed) and a cruiser also received a bomb hit but survived.

Soon after 8 a.m. on the 27th Milne Bay received its fourth air attack, this time from 8 dive bombers escorted by 12 Zeros. Two bombs fell close but harmlessly at the side of No. 1 Strip runway and the remainder burst wide of their target. Several of the Zeros dived in strafing attacks. They set fire to a Liberator bomber which had made a forced landing on the runway some time earlier but otherwise did no harm. Six of No. 75 Squadron's aircraft intercepted the raiders and Flying Officers Watson[1] and Jones[2] shared in shooting down one of the dive bombers, probably destroyed a second and damaged a third.

Meanwhile a flight of American Marauders that had been seeking shipping targets in the area were intercepted by a number of Zeros. One

[1] Sqn Ldr B. D. Watson, DFC, 403084. 32 Sqn RAF and 75 Sqn; comd 457 Sqn 1944-45. Clerk; of Strathfield, NSW; b. Strathfield, 15 Oct 1914.

[2] Sqn Ldr P. B. Jones, DFC, 403345. 118 Sqn RAF and 75 Sqn; comd 76 Sqn 1944-45. Costing clerk; of Lindfield, NSW; b. Cremorne, NSW, 25 Nov 1920.

Marauder crew shot down one of the attackers, the Japanese pilot ditching in the sea close to the shore. Two other Zero pilots, seeing the Zero hit the sea, dived on it and opened fire apparently intending to destroy it and so prevent it from being recovered by the Australian forces. As they did so Jackson and Flight Sergeant Riddel,[3] who were returning from a patrol, dived on these two Zeros and shot both of them down.[4] Some time after the raid Australian ground troops in the vicinity found three Japanese dive bombers that had crashed after the air battle which thus had cost the enemy at least four dive bombers and two Zeros. The defenders had one casualty: Flight Sergeant Munro[5] of No. 75 Squadron was killed when his Kittyhawk was shot down in combat. But the day's toll was not to be limited to Munro's death. Reports that the enemy were using tanks prompted Turnbull to make a search in the hope that air attack on them might be possible. Accompanied by Flight Lieutenant Kerville[6] he took off about 5 p.m. and flew over the enemy positions, searching carefully wherever the jungle opened sufficiently to give useful visibility. The pilots did not detect the tanks but they did detect a detachment of Japanese troops. Turnbull immediately put his aircraft into a steep dive and Kerville saw it suddenly flick on to its back when only about 200 feet from the ground, and crash. The cause of Turnbull's death remains unexplained, a probable explanation being that he was hit by small-arms fire from the ground. Eight days later a patrol from the 2/12th Battalion found Turnbull's body in the wreckage of his aircraft near K.B. Mission. The loss of a commander of Turnbull's calibre in battle can leave a unit leaderless and dispirited or it can redouble its fighting spirit. Turnbull had led his squadron briefly but faithfully and fearlessly, always willing to take any risk he expected his pilots to take. He was mourned in the objective way men mourn when engaged in battle; in killing him the enemy had reinforced the squadron in spirit. The unit was of course in no sense leaderless. Truscott succeeded to the command in which he was promptly confirmed. His appointment passed over Squadron Leader Meehan,[7] a fine flyer and senior to Truscott in rank but lacking his experience of combat operations.

Slowly falling back under the pressure of the Japanese advance the 7th Brigade troops, of whom the 61st Battalion was taking the main weight of the attack, were now much in need of relief. Clowes had been holding the 18th Brigade until the enemy's intentions should become known.

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[3] F-Lt R. G. Riddel, 404355. 66 Sqn RAF, 75 and 84 Sqns. Clerk; of Brisbane; b. Brisbane, 9 Jun 1919.

[4] The Japanese pilot who was shot down by the Marauder crew survived both that attack and the attacks by his fellow pilots. He was the first enemy airman taken prisoner at Milne Bay.

[5] P-O S. Munro, 402936. 401, 72 Sqns RAF and 75 Sqn. Dairy farmer; of Grafton, NSW; b. MacLean, NSW, 1 Jun 1921. Killed in action 27 Aug 1942. Munro's promotion to P-O was actually dated 1 Oct 1942.

[6] Sqn Ldr R. C. Kerville, 250662. 24, 75, 76 and 20 Sqns. Motor salesman; of Melbourne; b. Ascot Vale, Vic, 7 May 1914.

[7] W Cdr W. J. Meehan, 270368. 76 Sqn; comd 75 Sqn 1942-43, 83 Sqn 1943, 86 Sqn 1943-44. Commercial pilot; of Annerley, Qld; b. Guyra, NSW, 22 Aug 1910. Killed in aircraft accident 26 Aug 1947.

Since he could neither deny them entry into the bay nor landings under cover of night at some other point or points, the availability of an adequate reserve to meet such enemy action might well be crucial. Even so he could not afford to disregard the need to reinforce the troops who were actually engaging the enemy. Early on the 27th he committed one of the 18th Brigade's battalions (the 2/10th) to their aid. That morning the Kittyhawks and Hudsons were airborne as soon as there was sufficient light and, in spite of low cloud and intermittent rain, the air bombardment of the enemy's positions was resumed.

The strain was beginning to tell on both aircraft and men. On the ground the squadron's armourers, riggers, fitters, engineers, even transport drivers and messmen joined in the almost ceaseless work of belting ammunition and manhandling bombs and fuel drums. They worked with their clothes and bodies caked in mud and sodden with sweat and rain. The forward enemy positions were now so close that the Kittyhawks were in action, it seemed, almost before their undercarriages had retracted after take-off. Though liaison with the army was excellent, perfection in these close-support operations was not possible and at least one officer with the forward troops reported: "Planes strafed enemy positions and also our own troops."

It was now clear that unless the Japanese advance was soon checked the squadron's camps would soon be under fire. The camps were therefore moved back to a position adjacent to the main army camp to the west of No. 1 Strip and the operations room was re-established at Milne Force headquarters—a difficult and hampering task. The two Services were now literally fighting as one. Enemy snipers were giving considerable trouble. Equipped with climbing irons, they scaled the tall palms, cut out the centre of the upper fronds, and so made a post from which their fire became more telling and less easily detected. The army called on the Kittyhawk pilots for aid and allotted the target area. Sortie after sortie was made over that section of the plantation. The pilots could only hope that their raking fire was effective. Army headquarters soon reassured them; they were well satisfied with the results. One observer in the area insisted that under the Kittyhawks' gunfire "palm fronds, bullets and dead Japanese snipers were pouring down with the rain".

Clowes and Garing were now concerned about the safety of the Kittyhawks on the ground and decided late on the afternoon of the 28th that all aircraft should be flown to Port Moresby to remain there at least overnight. Twenty aircraft from No. 75 and 10 from No. 76 therefore made the 196-miles flight, one pilot, Sergeant Cowe, being killed when his aircraft, caught in dense cloud, crashed into a hill near the Seven Mile aerodrome. Next morning the squadrons moved back to Milne Bay. On the way Jackson's aircraft, which he had flown almost continuously in operations since the battle began, gave trouble and he had to crash-land on the coast. With the aid of natives he succeeded in making his way back to Port Moresby three days later by canoe and lugger.

On the 29th there was some confusion among the R.A.A.F. ground staff. A party of men, with the mistaken impression that an order for the evacuation of the base had been given, followed instructions issued for such an event and set out for Mullins Harbour. They were promptly recalled.

That afternoon an enemy cruiser and eight destroyers were reported heading southward from Normanby Island. The reporting Hudson crew, captained by Squadron Leader Colquhoun, had sighted the ships through a break in the low cloud under which they had been screened. Diving through heavy anti-aircraft fire the Hudson crew attacked a destroyer. One of their bombs exploded under the ship's stern and as the overcast closed in again they withdrew, reporting the warship "believed sunk". The sinking was never confirmed.

While the battle ashore was at its most critical stage Clowes' headquarters requested the aid of the R.A.A.F. in suppressing a Japanese light mountain gun, mounted on a commanding spur, that was causing considerable trouble. Truscott and Flying Officer Crossing[7] took off, located the gun and put it out of action with their gunfire.

Late on the night of the 29th a new and highly disturbing element was introduced into the battle. Japanese naval units, which had again sortied into Milne Bay, began bombarding the shore area. By good fortune all the shells burst harmlessly in the hills beyond the base. The crew of a R.A.A.F. crash-launch stationed in the harbour acted on instructions to move to Mullins Harbour. Manned by five men under Corporal Turner,[8] the launch was making its way towards the harbour entrance when the enemy ship that had been bombarding the coast caught and held it in the beam of a searchlight. Immediately the Japanese opened fire. The fourth shell hit the launch sinking it and killing Turner and two others. The two survivors were an army signaller, Private Farrar,[9] and Leading Aircraftman Donegan.[10] Farrar got ashore at a point 23 miles from Gili Gili. Donegan, wounded, drifted across the bay for 18 hours. Natives saw him, helped him ashore and tended him secretly in enemy-held territory, hiding him under an up-turned canoe. Later he returned to the base.

That day the battle had continued to be fierce and indefinite, but the discovery by an Australian patrol of two Japanese tanks bogged and abandoned on the track to the west of the Gama River was heartening news for the hard-pressed troops. On the morning of the 31st the 2/12th Battalion was in action when the Japanese made a concerted attack on No. 3 Strip. After their third attempt to cross the open area in close formation they were driven back leaving a considerable number of dead.

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[7] F-Lt I. E. Crossing, 406315. 5, 24, 76, 86 and 77 Sqns. Clerk; of Como, WA; b. Nedlands, WA, 17 Jan 1922.

[8] Cpl H. Turner, 11854. 11 Sqn and 43 OBU. Electrical fitter; of Croxton, Vic; b. Bradford, Eng, 6 Feb 1920. Killed in action 29 Aug 1942.

[9] Pte N. G. Farrar, WX29006. Signalman Milne Force and 15 L of C. Window dresser; of Mt Lawley, WA; b. Subiaco, WA, 17 Jul 1920. Accidentally killed 22 Jul 1943.

[10] F-Sgt J. F. Donegan, 41979. 43 OBU and 32 Sqn. Plumber; of Caulfield, Vic; b. Glenhuntly, Vic, 22 Dec 1910.

On the night of 1st September Clowes received a signal from G.H.Q. in Brisbane telling him, incorrectly, to expect attacks on the aerodrome positions from the west and north-west, supported by destroyer fire from the bay. Weary units were ordered to stand-to all night, awaiting attacks that did not come.

That day Jackson had led seven Kittyhawks from No. 75 Squadron in an attack on what was believed to be the Japanese headquarters to the north of Waga Waga. The jungle in the area was so dense that the pilots had no sure knowledge of the result of their assault.

Late on the afternoon of the next day a Hudson crew sighted, and for a time shadowed, several Japanese warships in the approaches to Milne Bay. With darkness approaching and the weather closing in, it was not possible to mount an attack. Enemy warships again shelled the shore defences that night. On the night of 3rd-4th September the naval bombardment was repeated but the shells fell harmlessly.

On the afternoon of the 5th the Kittyhawk pilots supplemented a heavy artillery and mortar barrage by Australian gunners. The target area was along the coastal road to the point of the Japanese landings. It was raked by repeated bombing and gunnery sorties. That night the forward troops found strong evidence that the enemy's resistance was breaking, and towards midnight Australian troops on the bay front were aware once more of the presence of enemy ships near at hand and heard the sound of boats moving between ship and shore.

Next day, apart from skirmishes with small pockets of enemy troops, the Australians moved forward without serious opposition until they reached what had obviously been the main Japanese base. They found it deserted and littered with abandoned supplies. After nightfall the bay was again the scene of great activity, the tension being heightened by the flashing of searchlights and the sound of heavy shell fire. The enemy's principal target proved to be the motor vessel *Anshun* which had been discharging equipment and ammunition at the Gili Gili wharf. The gunfire was accurate and the *Anshun* rolled over on her side and sank in the offshore shallows, leaving portion of her hull visible above the surface. Near at hand, and illuminated in keeping with International Law, lay the Australian hospital ship *Manunda*. The enemy ships played their searchlights on her but their gunners left her unharmed. Instead they turned their guns on shore targets, causing little material damage but inflicting a number of casualties among the army troops.

Next afternoon (the 7th) aircraft from the two Kittyhawk squadrons took part in the first attack from Milne Bay by Australian Beaufighters and Beaufort torpedo bombers. Six Beauforts from No. 100 Squadron, then based at Laverton, Victoria, had been flown to No. 1 Strip, led by the unit's commanding officer, Wing Commander Balmer. Arriving on the 5th September these aircraft had been joined next day by three Beaufighters from No. 30 Squadron, the first Australian unit to be equipped with these long-range fighters. It had been formed at Richmond,

New South Wales, on 9th March under the command of Wing Commander Walker[1] and had now been based for several weeks at Bohle River near Townsville.

A Hudson crew from No. 6 Squadron had reported sighting an enemy cruiser and destroyer 17 miles east-north-east of Cape Karitahua, on Normanby Island. Three Hudsons and 16 Kittyhawks (8 from No. 75 and 8 from No. 76 Squadron) with the Beauforts and Beaufighters were assigned to attack these ships. With the Kittyhawks flying as top cover the Hudsons led the way to the target area and scored two near misses at the stern of the destroyer. One of the Beaufighters crashed on take-off but the other two flew in to divert the warships' fire—the squadron's first combat sorties—while the Beaufort crews, who were making their first torpedo strike in combat, made their runs. None of the torpedoes found its mark. Without enemy aircraft to contend with, the Kittyhawk pilots made strafing runs over the ships, but when the attacks had ended neither vessel appeared to have suffered serious damage. Disappointed aircrew returned to Milne Bay to write down to experience this first combined operation of its kind mounted by the R.A.A.F.

That night two enemy ships—a cruiser and a destroyer (presumably those the R.A.A.F. had attacked)—entered Milne Bay and again the base was shelled, for about a quarter of an hour. There were several Australian casualties. Again the hospital ship *Manunda* was illuminated by the enemy's searchlights and again she was spared. The Japanese ships then withdrew. This withdrawal was final. Enemy warships never returned to Milne Bay. In their last sorties into the bay they had taken on board such of the remnants of their defeated land forces as could be assembled for embarkation.

As a parting shot nine enemy bombers attacked No. 1 Strip area on 8th September. They achieved little in the way of material damage but two members of No. 75 Squadron, Aircraftmen Rose[2] and Dowton,[3] were fatally wounded while manning machine-guns in company with detachments of A.I.F. gunners who also suffered some casualties. Four Kittyhawk pilots endeavoured to intercept the enemy bombers but without result.

Thus the Japanese met their first unquestionable defeat on land. It had been delivered by a strangely mixed yet remarkably cohesive force of A.I.F., Australian militia, R.A.A.F. and American engineer troops, all of whom had cooperated well. Even so their achievement was seriously questioned by General MacArthur who, in signals through General Vasey (then Deputy Chief of the Australian General Staff), General Blamey and General Rowell, had indicated to Clowes that he had been dissatisfied by lack of detailed information on the progress of the battle and in fact

[1] Gp Capt B. R. Walker, DSO, 94. Comd 12 Sqn 1941-42, 30 Sqn 1942-43; 5 OTU 1943-44; Test pilot duties 1944; comd 1 Fighter Wing 1944-45. Regular air force offr; of Adelaide; b. Lyndoch, SA, 27 Mar 1913.

[2] AC1 L. G. Rose, 52228. 24 and 75 Sqns. Orchardist; of Tatura, Vic; b. Tatura, 21 Nov 1923. Died of wounds 8 Sep 1942.

[3] AC1 A. R. Dowton, 64948; 75 Sqn. Butcher; of Warren, NSW; b. Dubbo, NSW, 2 Apr 1922. Died of wounds 8 Sep 1942.

with the progress itself. This attitude was reflected in an ungenerous statement he made after the battle in the course of a letter to General Marshall:

> The enemy's defeat at Milne Bay must not be accepted as a measure of the relative fighting capacity of the troops involved. The decisive factor was the complete surprise obtained over him by our preliminary concentration of superior forces.

One incidental but very important benefit from the battle lay in the inter-Service confidence it had inspired. The men of the R.A.A.F. found their natural pride in the A.I.F. stimulated by a new admiration that had grown out of first-hand experience. To this was added an appreciation of how good the militia troops could really be. The army had reacted in much the same way. There was a new sense of comradeship that was in happy contrast to the cynical relations between the Services noticeable about the time of the fall of Singapore. The attitude of the R.A.A.F. was crisply if somewhat chauvinistically put by a young pilot who, watching a platoon moving through the plantation area after the battle, remarked, "The Australian soldier must be the best soldier in the world. We've seen him fighting and if anyone ever tries to tell me anything different I'll punch his nose!" Clowes gave the army's point of view, more formally, but no less warmly when he wrote:

> I wish here to place on record my appreciation of the magnificent efforts on the part of our R.A.A.F. comrades. The success of the operations was in a great measure due to their untiring and courageous work which has earned the admiration of all who have been associated with them here.

Rowell, in a report to General Blamey, expressed the opinion that "the action of 75 and 76 Squadrons R.A.A.F. on the first day was probably the decisive factor", a view that Clowes elaborated by stating that he was convinced it would be proved that the Kittyhawk squadrons' "incessant attacks over three successive days proved the decisive factor in the enemy's decision to re-embark what was left of his forces".

When it became clear that, for a time at least, the Japanese had been forced to suppress, if not forfeit, their Milne Bay ambitions, life for Nos. 75 and 76 Squadrons took on something of a pattern. The battle had left them much to do to recover their technical balance. Seen in retrospect it seemed remarkable that men and machines had endured and accomplished what in fact they had. The average daily availability of aircraft for the two squadrons was about 28; No. 75 Squadron had been issued with new aircraft just before leaving the Australian mainland, and thus had a distinct advantage over No. 76 whose aircraft were worn by much flying training before they reached Milne Bay. The maintenance of the two squadrons' aircraft had been accomplished under conditions that could scarcely have been worse. The Kittyhawks wore out about 300 gun barrels in the course of the battle, in which they fired 196,000 rounds.[4] The ground staff eventually were changing the barrels almost from habit.

[4] Armourers found that the wear, accentuated by mud and grit thrown up from the runway, had increased the guns' calibre from 0.5-inch to as much as 0.6-inch

They replaced flaps damaged by the force with which water and mud were flung up from the undercarriages as aircraft took off and landed, and tyres ground down by excessive friction on the steel matting. They even changed mainplanes though they had nothing but an improvised workshop and few tools. A detachment of No. 15 Repair and Salvage Unit had been sent from Port Moresby but its staff were handicapped from the beginning: their precious workshop trailer was lost overboard while being unshipped at Gili Gili wharf. One of those chiefly responsible for what *was* accomplished was Flying Officer Matson,[5] engineer officer of No. 75 Squadron, who had arrived at the base by flying-boat on 22nd July with the unit's advance party. In less than two months he had earned a reputation for tireless effort and ingenuity in overcoming technical difficulties that contributed greatly to the work total of the two squadrons during the battle.

Now that the battle was over the men of the squadrons had more time to take stock of their surroundings. The vagaries of the weather and the monotony of the food became more important. The weather was still hard to believe, as it alternated between deluge, brooding and isolating overcast, and flashes of brilliant sunshine that lit up all the unexpectedly luxuriant flower and bird life in the adjacent jungle. The rations were still tins of the inevitable bully beef, spam and "M. and V." (a composite of meat and vegetables) together with the essential ration biscuit, and little else.

Though the tension had lifted the Kittyhawk pilots continued to fly in conditions always exacting because of the weather and the enemy's counter operations. When they were not flying, eating or sleeping, most of them sat in their tents or, if on stand-by, in the operations room (itself a tent), writing letters, reading anything they could lay their hands on, or playing seemingly interminable games of "Slippery Sam" and "Rickety Kate" in which the cards became increasingly soiled by perspiration. On clear nights they would gather in groups and sing, the darkness in the coconut palms broken only by the light from a myriad of fireflies. These impromptu concerts had a boisterous good humour about them but they had, too, a deep psychological significance. Some of the songs had been imported from the R.A.F.—old and tried favourites like "The Gremlin Song" that dramatically recounted all the tricks these fabulous little creatures the "gremlins" could play on a pilot when he was "seven miles up in the heavens". But for the most part they mirrored the singers' own experiences, their needs and discontents (real or imaginary). The chief ingredients in these were beer, women, leave, and flying incidents, which made up in all a healthy enough nostalgia. Then there was derision, a favourite theme, chiefly directed against authority, with the Air Board lampooned without respect and without mercy, but extending also to Australian aircraft production, which was subjected to cruel treatment with

[5] W Cdr W. I. Matson, MBE, 1018. 75 Sqn; Maintenance Offr 2 OTU 1942-43; comd 7 RSU 1944-45, Maintenance Wing 2 OTU 1945. Regular airman; of Camberwell, Vic; b. Essendon, Vic, 3 Jan 1902.

special emphasis on the Wirraway in which so many of them had learned to fly and the Beaufort, cynically lyricised as "The D.A.P's Pride" (D.A.P. standing for Department of Aircraft Production). Many of the songs, almost all of which were parodies, were vulgar and obscene (usually laughingly so) to a degree quite alien in the normal personal lives of most of the singers. Yet they were sung, as they had been composed, without a trace of inhibition. This lack of inhibition was a safety valve through which they were able to ease tensions imposed on them by the strain of battle.

Close at hand and mingling freely with the Kittyhawk pilots were the crews and ground staff of the detached flight from No. 6 Squadron. The Hudson crews had given remarkable service with their consistently efficient long-range reconnaissance and their determined shipping attacks. The main burden had been borne by the detached flight the crews of which were captained by Squadron Leader Colquhoun, Flight Lieutenants Robertson,[6] Manning, Willman,[7] Flying Officer Shore[8] and Sergeant Stutt.[9] Their ground staff had also given resolute service, their larger aircraft with greater bomb and fuel loads calling for heavy work. Bombs and fuel drums had to be manhandled from dumps that more often than not were in six or more inches of water. All the servicing was done with an intense pride in the unit and its crews. As an example, Colquhoun had the experience of six members of his ground staff competing eagerly to be allowed to take the place of a gunner who had been wounded, a problem he solved by taking each of them in turn. In August No. 6 Squadron recorded 272 hours of flying, 150 of which were spent on operational sorties. In September these totals were multiplied more than five and eight times respectively, the month's figures being: total flying hours, 1,441; operational hours, 1,211.

The commanders of all Services were now becoming sharply aware of another enemy that was inflicting far more casualties than were the Japanese—the anopheles mosquito. When Australian forces were first sent to battle stations in Papua, malaria was recognised as a problem to be countered, and first quinine and later atebrin tablets were freely issued. But few of those in authority realised soon enough the true extent of the danger, and those who did could not compete against the pressures that time and the threat of invasion imposed. Troops were trained and kitted as capacity and resources and generally accepted standards dictated, and hastened on their way to jungle stations. Much was lacking but the deficiencies would have to be made up later; the essential need was for men and weapons to meet the enemy. Tropical conditions traditionally

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[6] Sqn Ldr H. A. Robertson, 290667. 8, 14, 32 and 6 Sqns; CGI at gunnery schools 1943-45. Store manager; of Brighton, Vic; b. St Kilda, Vic, 12 Feb 1911.

[7] Sqn Ldr M. W. Willman, 260766. 7, 32, 6 and 1 Sqns. Wool classer; of Balgowlah, NSW; b. Sydney, 4 Jun 1918.

[8] F-Lt R. W. Shore, 411199. 7, 14, 6 and 37 Sqns. Bank clerk; of Bexley, NSW; b. Bexley, 13 Sep 1917. Killed in aircraft accident 20 Dec 1944.

[9] F-Lt W. J. Stutt, DFC, 408536. 7, 32, 6 and 24 Sqns. Student; of Kew, Vic; b. Melbourne, 24 Jan 1918.

called for the issue of shorts and short-sleeved shirts, and thus provided the troops—army and air force—went into action. It was from Milne Bay that the first truly alarming statistics came: statistics that proved beyond doubt that the fever could reduce a fighting force almost to the point of impotence without having met the Japanese in battle.

On 21st September Airacobra pilots of Nos. 35 and 36 U.S. Fighter Squadrons flew in to No. 3 Strip to relieve the Kittyhawk pilots of Nos. 75 and 76 in much the way that the same two squadrons had flown in to Port Moresby five seemingly very long months before to relieve No. 75. The two Australian units then moved, No. 75 to Horn Island and No. 76 to North-Western Area. Three days after the arrival of the American squadrons the last elements, the ground staff of the two Kittyhawk squadrons, had put to sea.

In mid-July Lieut-General Hyakutake, commanding the *XVII Army,* still with his headquarters at Davao in the Philippines, ordered practically his entire force to make ready for action against the Allied forces in New Guinea. With his headquarters staff Hyakutake reached Rabaul on 24th July. On 28th July Hyakutake received orders to begin the main assault which provided for a joint thrust over the Owen Stanleys by the *South Seas Force* and *Yazawa Force* (*41st Regiment*) while the *Kawaguchi Force* (*124th Regiment*), supported by the *Eighth Fleet,* commanded by Vice-Admiral Mikawa, would make the assault on Milne Bay from where they were to strike at Port Moresby in coordination with the trans-mountain thrust. A diversion was to be made by naval forces in the Lae and Salamaua area. Meanwhile Mikawa would employ engineer troops at Buna in the construction of aerodromes and the development of a major base there. Buna was reinforced by 600 troops on 23rd July and again by 900 on the 25th-26th. Four days later the effort was repeated and, though Allied aircraft sank the transport *Ayatosan Maru* which was carrying the remainder of Yokoyama's engineer regiment (about 260 men) most of whom reached the shore in the ship's boats, a force estimated at 2,100 was put ashore. A transport carrying supplies was forced by the Allied air attacks to retire to Rabaul as was a further convoy that made an attempt to reach Buna on the 31st. Reinforcement efforts showed better results on 13th and 14th August when, under cover of overcast weather and strong air protection, 3,100 troops were put ashore. It was then that Horii moved his main *South Seas Force* into action. By 21st August there were in action or ready for it on Papuan territory more than 13,000 Japanese troops.

But the main task of the *XVII Army* had been abruptly revised by the landing of the American Marines on Guadalcanal, Tulagi and Gavutu. This was a threat so grave that Hyakutake was ordered to make the recapture of Guadalcanal his chief objective. In this he faced many obstacles. His forces were widely dispersed—the real strength of the American assault had been gravely underestimated and *Ichiki Force*

(*II Battalion 28th Regiment*), who had been recalled from their homeward voyage after the failure at Midway, and a portion of the *5th Yokosuka Naval Landing Force,* who were now opposing the Americans, were insufficient for the task. *Kawaguchi Force,* which had been intended for the Milne Bay attack, was diverted for reinforcement at Guadalcanal. Thus the plan for the assault on Papua had been seriously upset.

Early on the morning of the 26th about 600 officers and men of the *5th Kure Naval Landing Force,* the *10th Naval Labour Corps* (a force of about the same numerical strength) and possibly 200 members of the *5th Sasebo Naval Landing Force,* were landed on the shores of Milne Bay. But operations went awry from the beginning. A force of about 350 members of *5th Sasebo* had been moved down from Buna in barges with orders to land at Taupota, on the coast of Goodenough Bay, and then move overland in a flank or rear attack on Milne Bay. This plan was disrupted when the Kittyhawk pilots wrecked their barges and stores and left them marooned on Goodenough Island. Then the main force had landed at a point farther from Gili Gili than had been planned. Throughout the 26th the attacks by the Australian fighter squadrons, supplementing the Australian land force resistance, caused casualties and confusion. Incessant rain with boggy conditions, lack of any direct support from their own air units, and the hostility of the natives increased their difficulties which, with the bogging of their tanks and the determined counter-attacks by the Australian troops, culminating in the fateful and costly Japanese assault on No. 3 Strip area, added up to defeat for the invading forces. Of the reinforcements brought in there is some doubt. One company each from the *3rd Kure* and *5th Yokosuka* are thought to have been put ashore on the night of 29th-30th August but this added strength (about 450) would not have been sufficient to affect the outcome of the battle at this stage. Apart from the bombardment of the defenders' positions, the main purpose of the naval movements in the bay by night was evacuation of wounded and, finally, withdrawal of as many of their troops as could be embarked. It is estimated that the Japanese casualties amounted to about three-quarters of the total force of about 2,000 officers and men landed.

How a Japanese bombing attack on the Milne Bay base was diverted to Guadalcanal on 7th August is graphically told in the battle record of Flight Petty Officer Saburo Sakai, a section leader then based at Rabaul. Sakai wrote:

> Guadalcanal. A name, merely a name. We did not even know what Guadalcanal was; an island, a military base, a secret operation code name, perhaps. . . . This morning, however, our usual mission of fighter patrol, attack against Moresby, or air-to-air combat, was to be replaced with a special attack against the Rabi air base at Milne Bay, on the south end of New Guinea. . . . As we checked each other's equipment and made the final preparations for take-off, to escort the bombers which would attack Rabi, a messenger ran past us into the operations room with a radio message. . . . We listened closely . . . and every now and then could catch the words 'Guadalcanal' and 'Tulagi'. They were strange names. . . . Captain

Saito came out. 'At 0525 hours this morning,' he said, 'a powerful enemy invasion force under heavy cover attacked Lunga Roads, Guadalcanal Island. . . . The situation is extremely serious. Our naval forces operating in the Rabaul area have been ordered to engage the enemy immediately, in full strength, and to drive back the American invasion forces at any cost. . . . Our fighter units have been ordered to escort the land-based medium attack bombers which will attack enemy ships. Certain fighter groups will precede the bombers and their escorts into the battle area as challenging units to draw off the American fighter planes.'[1]

The Japanese headquarters had issued a general order for the Milne Bay operation which read: "At the dead of night quickly complete the landing and strike the white soldiers without reserve. Unitedly smash to pieces the enemy lines and take the aerodrome by storm." For the first time the rhetoric that characterised most of the enemy's general orders had been proved completely false.

[1] Masatake Okumiya and Jiro Horikoshi with Martin Caidin, *Zero* (1956), pp. 180-3.

CHAPTER 30

ADVANCE TO BUNA

TENSION in the Milne Bay area having subsided, the focal point for G.H.Q's main anxieties was now the fighting on the Kokoda Track, where depleted and weary elements of the 21st Australian Brigade had now been reinforced by the 25th Brigade, but the strength to turn the Japanese back seemed still to be lacking. The Japanese commander, Major-General Horii, leading the men of the *South Seas Detachment* into battle in person, was obviously striving hard to make good the advantage he had gained. In a series of fierce attacks his troops, by 20th September, had forced the Australians back from Ioribaiwa to Imita Ridge, about 30 miles from Port Moresby.

The struggle was bitter, but General Rowell was confident that the enemy could be held until the reinforcements that were arriving could be brought into action. Though supply was still a crucial problem, he recognised that the farther the enemy's lines of communications extended across the mountains the more vulnerable they became to the weakness from which his own troops had been suffering and, conversely, the less severe his own problem of supply became. But the battle in the mountains was only a part of Rowell's command responsibilities. As he outlined it, his primary task was "the retention of Port Moresby as an air operational base". This demanded adequate protection against seaborne attack, but "the needs of the situation to the north" had forced him to draw away more and more troops until he had but one battalion (and it was engaged in unloading ships) where, to be secure, he needed not less than a division with a complement of tanks.[1]

Some anxiety had been expressed at meetings of the War Cabinet and the Advisory War Council about the situation in New Guinea and, at the request of the Minister for the Army, Mr Forde, General Blamey had gone to Port Moresby on 12th September to confer with Rowell. He returned two days later and said both publicly and to the Advisory War Council that he shared the confidence of Rowell and the other commanders in the field that the Japanese would not be able to take Port Moresby from the land. Blamey made his report to the Council on the 17th. That evening, however, General MacArthur informed the Prime Minister that, far from sharing the Australian commander's confidence, he was considerably worried by the situation in the Owen Stanleys and blamed the Australian troops for lack of efficiency. He told Mr Curtin that he had resolved to send American troops to New Guinea and asked him to agree to Blamey's immediate return to Port Moresby to take

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[1] Headquarters 6th Division AIF was now established at Port Moresby but only its 16th Brigade, which arrived on 21st September, was to be available. The 17th Brigade was on its way to Milne Bay and the 19th was in the Darwin area.

command personally so that he could "energise the situation". Curtin assented and Blamey had no choice but to agree.

MacArthur's doubts about the fighting capacity of the Australians on the Kokoda Track, and about Rowell as their commander, had been supplemented, if not inspired, by General Kenney after a visit to New Guinea at the beginning of September. "I told General MacArthur," he wrote later, "that I had no faith in the Australians holding Kokoda Gap. The undergrowth at that altitude was sparse and the Nips would move through it and around the Aussies and work their same old infiltration tactics." Some days later Kenney, at a further interview with MacArthur, elaborated these doubts. In his own record of the discussion he states: "I told the General that I believed we would lose Port Moresby if something drastic did not happen soon. . . . I believed that Rowell's attitude had become defeatist and that this attitude had permeated the whole Australian force in New Guinea."[2]

Perhaps it was typical of the ebullient, egocentric Kenney that he should make a snap judgment on a land-force situation for which he had no direct responsibility. Yet his ignorance of the nature of the battle and of the country in which it was being fought was lamentable in the commander responsible for air support. His unjustified and ill-timed criticism of Rowell is of consequence here because of the influence it must have had on MacArthur's judgment. The facts at the time and subsequent events disprove the charge against Rowell, and the Australian troops engaged in that battle would have been expressively derisive about Kenney's impression of the Kokoda "Gap".

In a letter dated 11th September, the Commander-in-Chief had told Blamey that he intended to execute a flanking movement with the 32nd American Division which, in a march across the mountains, would be able to intercept the Japanese as they fell back from Kokoda. By this means the Japanese forward troops could be "liquidated" and the Allied forces could then concentrate on the reduction of Buna. This concept originated, of course, before MacArthur told Curtin of his concern about the Australians' "lack of efficiency".

A key to success in any such operations, as it already was to the success of the Australians' campaign in the Owen Stanleys was the availability of transport aircraft. By mid-September Kenney's air force had on hand only 41 of 78 transports that had been assigned and of these about 15 were of use only for spare parts. But Kenney, with strong backing from MacArthur, kept up the pressure for the promised aircraft and succeeded in inducing the Operations Division of the War Department's general staff to release two additional squadrons.[3] The possibility of investing Lae

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[2] *General Kenney Reports*, pp. 89 and 94.

[3] Despite this, Fifth Air Force did not obtain its quota of transport aircraft until late in November. One of the new squadrons, now termed troop carrier squadrons, with 13 Dakotas (Douglas C-47s) arrived in mid-October. The second was "intercepted" by General Harmon for the Guadalcanal operations in which 7 of the aircraft with their crews were engaged for more than a month before being freed to continue their flight to Australia.—Craven and Cate, *The Army Air Forces in World War II*, Vol IV, pp. 113-4.

and Salamaua by landing airborne troops in the vicinity, was investigated about this time at Blamey's suggestion, but the acute lack of aircraft of the type essential for the task, and MacArthur's misgivings because of the enemy's command of the sea, stayed development of the plan. Nevertheless Kenney was closely examining MacArthur's plans for "enveloping" operations.

As early as 18th August Kenney, remembering Group Captain Garing's advice about the suitability of the Wanigela Mission area, had flown over the site which he later described as "a natural", adding, "we could land there any time and occupy and supply the place by air".[4] Further, on the same flight he had made a survey of the coastal fringe to the north-east with the same quest in mind. Then, on 8th September, he was back in Brisbane outlining to MacArthur with obvious enthusiasm his own plans for the occupation and development of air bases from Wanigela to the Buna-Gona sector with particular emphasis on the value of the Dobodura plain a few miles south of Buna. Here he envisaged the establishment of a major air base. This would permit him to extend the range and bomb-loading of his aircraft and to avoid the always exacting climb over the Owen Stanley Range with its all-too-frequent barrier of thunderous weather. The Wanigela base, he reported to MacArthur, could be quickly developed by putting in advance parties in light aircraft, setting natives to work cutting the kunai grass, and then flying in troops—at the rate of 1,000 a day if need be—and supplying them by air with food and ammunition. MacArthur, though impressed by Kenney's lively conception, was still cautious. He replied that he was "not ready yet for the Wanigela thing". He was, in fact, planning the larger diversionary operations he had outlined in his letter to Blamey. Brig-General Hanford MacNider, commanding the first detachments of the 126th U.S. Regiment to arrive in Port Moresby, had been ordered to prepare for this operation. He therefore sent out a patrol to reconnoitre the route from Rigo, on the coast about 45 miles south-east of Port Moresby, across the southern slopes of the Owen Stanleys, north-east over the range itself to the headwaters of the Kumusi River and then north-west along the course of that river to meet the Kokoda-Buna track at or near Wairopi to the east of Kokoda.

Rowell, who discussed these plans with MacNider, had little faith in their ultimate value. He later recorded that since MacNider was acting on G.H.Q. orders he could not veto the proposals, but he would not countenance the diversion of facilities from the main task, which was to drive the Japanese back along the Kokoda Track.

Meanwhile the main troops of the 126th and 128th Infantry Regiments of the 32nd U.S. Division were being prepared for the move from the Australian mainland to Port Moresby. At a staff conference at General Headquarters on 13th September Kenney had asked MacArthur to let

[4] The site was first found by F-O L. Halliday of No. 32 Squadron on 15 June 1942 when obliged to make a forced landing in a Hudson while on patrol from Horn Island. Halliday reported it as a good emergency "wheels down" landing ground. Garing then inspected the site and thereafter reported it to General Kenney.

him fly the first regiment in to New Guinea. The Commander-in-Chief asked how many men he would lose and received the reply that they had not yet lost a pound of freight on that route and that "airplanes didn't know the difference between 180 pounds of freight and 180 pounds of infantryman".[5] He was given a company to fly to Port Moresby "to see how long it took and how the scheme worked out". MacArthur's staff were very dubious, but, on the morning of the 15th, 230 troops of the 126th Regiment together with their small arms and packs were embarked in Douglas and Lockheed transports at Amberley and all were safely carried to Port Moresby that day. Though he sent the rest of the 126th by sea, MacArthur was now convinced; he instructed Kenney to collaborate with the recently arrived American corps commander, Lieut-General Robert L. Eichelberger, in arranging for the air transport of the 128th Regiment beginning on 18th September. By direct appeal to the Minister for Air, Mr Drakeford (who was also Minister for Civil Aviation), Kenney was able to commission 12 airliners from the civil airline operators for a week. He ordered that all bombers coming from maintenance workshops anywhere in Australia after overhaul should be assigned to troop transport tasks and any suitable aircraft arriving from the United States should be temporarily commandeered, together with their civilian ferry crews, to lend additional aid. The lift was carried out at the rate of about 600 men every 24 hours, and by 24th September the last of the regiment had been landed at Port Moresby, two days before the men of the 126th Regiment arrived by sea.

The achievement was notable not only for its complete success in difficult circumstances in which service and civil organisations had to be coordinated at short notice, but as the first major movement of American troops by air since the war began. MacArthur was pleased and now agreed that Kenney should have his way with the Wanigela project. The use of Wanigela as an air transport staging point had much to commend it since, with no fighter base on the northern side of the Owen Stanleys, air cover could not be provided for the slow-moving coastal transport which was so very vulnerable to enemy sea and air attack.

Blamey arrived in New Guinea to take command on 23rd September. On the 25th he flew to Milne Bay and went on to reconnoitre the Wanigela Mission area. Approving the site, he advised MacArthur that there would be little risk of enemy interference if the operation to establish a base there was carried out promptly. Subject to a check on the entire plan by Kenney, MacArthur, on 2nd October, approved Operation HATRACK, as it had been named. One effect of this decision was to limit the planned overland movement by the 32nd Division, only one battalion of which would now be sent on the exacting march against the Japanese flank.

With his limited resources in aircraft, Kenney's air transport task would now be immense. "For the moment air supply is paramount," Blamey

[5] Kenney, pp. 97-8.

wrote to MacArthur. In this letter, dated 5th October, he reported that at a conference attended by Walker, Harding, MacNider and Lieut-General Herring (who had succeeded Rowell as the commander of New Guinea Force), it had been determined that, with the Kokoda front, Kanga Force, HATRACK and the 32nd Division's overland operation, the front-line troops to be supplied would number approximately 7,000 and the essential carrier lines still needed would add 3,900 natives to the total.[7] The total average daily air transport requirements (not including reserves) was 102,000 pounds. The successful establishment of a small-ships supply line from Milne Bay to Wanigela (which might always be precarious), the improvement in the situation when Kokoda aerodrome could be re-opened and aircraft land there, so saving approximately 30 per cent of their loads (the estimated loss in dropping supplies), and the landing of aircraft at Wau (to supply Kanga Force) would reduce the minimum daily weight for air transport to 61,900 pounds.

In all calculations it was necessary to recognise that frequently there would be days when bad weather would completely prohibit flying. The weaknesses in the air supply organisation which Rowell had found were being countered only after much trial and error, the finding of a solution being quickened by an urgency that often was desperate. Priority for the next day's operations, which was decided daily, was based on signalled statements of holdings in the forward areas. If the number of aircraft fell short of requirements these priorities had to be adjusted. New Guinea Force Headquarters was now advised by direct telephone call of the departure of each aircraft. Yet in spite of these efforts, as late as 7th October, Major-General Allen,[8] commanding the 7th Division now pressing northward across the Owen Stanleys, reported that the weakness in the air dropping program was causing the "gravest concern". This was a highly disturbing reminder of the situation almost two months earlier when lack of supplies had forced the withdrawal of troops from battle. Allen's message warned: "Unless supply etc. dropping of 50,000 pounds daily, plus additional to build up reserve is assured, complete revision of plans will have to be made and large proportion of troops withdrawn to Imita Ridge position. Any attempt then to hold a determined enemy advance . . . and to occupy Kokoda will be jeopardised beyond all reason." The warning was well heeded; the air supply program was increased and the risk of withdrawal was averted.[9]

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[7] It was calculated that without air supply the maintenance of troops in action between Uberi and Kokoda alone would require the services of 10,000 carriers. For a detailed analysis of the army supply situation at this time, see D. McCarthy, *South-West Pacific Area—First Year*, pp. 260-2, in the army series of this history.

[8] Maj-Gen A. S. Allen, CB, CBE, DSO, VD. (1st AIF: 13 Bn and CO 45 Bn.) Comd 16 Bde 1939-41; GOC 7 Div 1941-42, 6 Div 1942-43, NT Force 1943-44. Chartered accountant; of Sydney; b. Hurstville, NSW, 10 Mar 1894. Died 25 Jan 1959.

[9] In the background of this aerial supply service was a new supply organisation, the Combined Operational Services Command, the establishment of which had been ordered by MacArthur on 5th October. COSC was designed to meet the administrative difficulties of supply. Placed under the control of the Commander, New Guinea Force, it included all Australian Lines of Communications units and the United States Service of Supply. It was responsible also for all coastal seaborne supply lines. See McCarthy, pp. 350-1.

Meanwhile an advanced party of the Australian Army, including a detachment of engineers, had been landed at Wanigela where, with the aid of natives, they had burned off the kunai grass on the selected aerodrome site and cleared a runway. Blamey had already ordered Clowes to prepare the 2/10th Battalion at Milne Bay for an air move to the new base and, on 5th October, the day the II Battalion of the 126th U.S. Regiment began their trans-mountain march from Kalikodobu, near Rigo, the air lift to Wanigela had begun. In two days the Australian battalion and a battery of American .5-inch anti-aircraft guns had been flown in. The task was given to No. 21 U.S. Transport Squadron which made 60 sorties, one crew completing five return flights between Laloki airfield near Port Moresby, and Wanigela, in one day. Fighter cover was provided throughout the operation, all enemy airfields were under close reconnaissance and light-bomber units were on stand-by for concentrated attacks on Lae and Salamaua should any special enemy air activity be reported. While the troops disembarked and stores and equipment were unloaded the transports' engines were kept running so that they were ready for immediate take-off. Equipment and stores were camouflaged or hidden when unloaded. The entire operation was performed without a hitch. General Harding of the 32nd Division was so impressed by the efficiency and speed with which HATFORCE was established that he immediately sought information on the possibility of securing other aerodrome sites closer to Buna. The proposal received support from both Whitehead and Walker and, with the aid of a New Guinea-born missionary, Mr Cecil Abels, who knew the country well, a reconnaissance was made. Abels, assisted by natives, then made a preliminary landing strip at a point about four days' march from Sapia, midway across Papua. Moving northwards from this landing ground, named Abels' Field, American engineers spent several weeks, clearing strips as they went until they reached the coast where, in the vicinity of Pongani, they had, by 4th November, cleared a runway as the beginning of another important base.

It was hoped that, once established in the forward areas round Buna, the Allied troops could be maintained by a sea shuttle-service drawing on supply dumps at Wanigela or Porlock Harbour. It had been laid down that air transport would not be demanded if supplies could be maintained by sea. But Allied Air Forces could not provide air cover for this sea lane and Whitehead warned the army that failure to keep the small ships under cover in daylight might result in the elimination of the flotilla.

MacNider, appointed to command HATFORCE, had been given three immediate tasks: establish Wanigela as a sea and air supply base, "exploit" forward towards Buna by both sea and land, and develop a small-ships supply service between Wanigela and Pongani. The significance of Wanigela was thus emphasised and, despite misgivings at New Guinea Force Headquarters about the risk of attack from the sea, the movement there of substantial supplementary forces was undertaken. On 14th-15th October the 128th U.S. Regiment and 2/6th Australian Independent Com-

pany were flown from Port Moresby to join HATFORCE. Almost immediately the men of the 2/6th set out overland for Pongani. Soon after they had crossed the Musa River heavy flood waters blocked the route and the 128th Regiment, thus cut off, was obliged to make use of two 20-ton luggers that had arrived from Milne Bay. On 18th October they began a coastal ferrying movement to Pongani with approximately 80 troops on board. The luggers were intercepted and attacked by an "unidentified" bomber which later proved to be an American Mitchell, the crew of which mistook the luggers for enemy craft. The attack was tragically successful. There were several casualties and one of the luggers was extensively damaged. The ferrying, however, continued for several days until the 128th Regiment had been moved.

The progress of the II Battalion of the 126th Regiment through the mountains was slow and arduous and the task of dropping supplies to them extremely difficult. Parachutes were limited in number and were reserved for ammunition, medical supplies and other fragile goods; the rest were wrapped in blankets which were bound by wire and tossed free from the aircraft. So great was the demand for supply aircraft that at times bombers were being impressed, the Mitchell becoming one of the most successful. Experience proved that on such missions the best dropping altitude was between 400 and 500 feet; higher altitudes led to inaccurate dropping and at lower levels there was a marked increase in the amount of damage caused to free-falling bundles. Damage to ammunition so dropped created a special problem; the troops sometimes found it faulty, with serious results.

This movement of forces to the northern coastal area added notably to the air defence responsibilities of the Allied Air Forces. Kenney saw clearly that if the Japanese air units, now fairly effectively suppressed, could gain fighter bases closer at hand, he could very quickly lose the superiority he had gained.

In the latter part of October an Australian force (2/12th Battalion and attached troops) was given the task of "cleaning-up" Goodenough Island where there was a Japanese force who had been on the island since No. 76 Squadron had destroyed their barges on the eve of the battle for Milne Bay. The operation proved difficult because of the ruggedness of the country and the sharp resistance of the Japanese. The encounter cost both sides some casualties before the Australians mastered the situation on 23rd October.[1] Thereafter the Australian troops set about constructing an air strip at Vivigani. The small garrison then set to work to build "ghost" camps with tents, dummy buildings, false weapon pits and gun emplacements, anything in fact that their ingenuity could devise to create the impression that the island was occupied in strength.

A similar, though lesser, operation had been undertaken on 21st-23rd September on the north-eastern coast of Normanby Island where sur-

[1] The Japanese force had been maintained by submarines which had taken off their sick and the men wounded in the Kittyhawk pilots' attack. After the action with the Australian occupation force, the surviving enemy troops escaped by night in two barges, crossing to Fergusson Island where they were picked up by a Japanese cruiser and taken to Rabaul.

vivors from the enemy destroyer that had been sunk in the combined attack by Allied aircraft on 11th September had got ashore. Some prisoners were taken, but the enemy's main party retreated into wild country in the interior of the island where they could not be located without considerable military effort and so they were abandoned there. Kittyhawks from No. 75 Squadron had provided air cover for this operation—their last sorties before moving to Horn Island.

Meanwhile the 7th Australian Division had advanced over the Owen Stanleys to Kokoda and beyond. Horii's hungry and depleted force had been ordered to fall back to the north coast and on 28th September the 25th Brigade found the Japanese positions at Ioribaiwa abandoned. The Australians pressed northward. There was hard fighting round Templeton's Crossing; this rearguard was forced back and by 22nd October the troops faced strong defences at Eora Creek. It took until 28th October to overcome these; on 2nd November Kokoda was reoccupied and next day supplies were dropped there and the airfield was being put in order.

In this phase air support operations were more positive, as when the 2/33rd Battalion pressed towards Templeton's Crossing while bombs from Allied aircraft fell ahead of them, and when aircraft tried to strafe the Japanese positions at Eora Creek immediately ahead of the Australian troops. Though their fire fell too far back to affect the immediate issue, this was encouraging proof that air support was at hand. At 9.45 a.m. on 5th November the first Dakota aircraft landed at Kokoda. Several more followed. All carried rations, clothing and medical supplies; the sick and wounded could now be flown back to Port Moresby.

At Myola the situation had been very different. Here 438 sick and wounded men waited to be evacuated. Engineers had prepared a landing strip and by the end of October it had been possible to land a Stinson aircraft on it. This was followed, in the early days of November, by several more light planes and a few patients were flown out, but Whitehead and Garing ruled against a large-scale air lift with the aircraft then available. There was natural disappointment and some criticism of this decision but the wisdom behind it was borne out when, five more suitable aircraft having been obtained, an attempt was made to operate a medical air evacuation service. A single-engine Stinson and a tri-motor Ford both crashed at Myola soon after beginning operations and each of the other three aircraft—two Stinsons and a Dragon Rapide—crashed soon after arriving in New Guinea. Of the two aircraft that did land, the Ford evacuated eight and the Stinson about 30 patients before they were wrecked. Even so it was clearly impossible to operate such a service with a reasonable margin of safety.

For the air units supporting the Australians fighting on the Kokoda Track one of the chief objectives was the disruption, if not the destruction, of the Japanese supply lines. A key target in these operations was a suspension bridge across the turbulent Kumusi River at Wairopi in the

valley below Kokoda.[2] The location deep in the valley, and the nature of the target itself, called for great flying skill and accuracy in bombing and gunnery, with a considerable margin still left for luck. Airacobra pilots had made the first of what was to be a long series of attempts to wreck the bridge when, on 1st August, they had dropped 300-lb bombs without success. As attack after attack was made the bridge would sometimes be damaged and the movement of enemy supplies hindered, but the Japanese repaired it as assiduously as spiders repairing cobwebs.

At frequent if irregular intervals Allied airmen continued their efforts. Machine-gun and cannon fire and bombing did no more than damage it. A R.A.A.F. Kittyhawk pilot flew in and dropped a bellytank of petrol near one of the supporting trestles and endeavoured, without success, to burn it down by igniting the fuel with gunfire. Even heavy bombers were called on, four Flying Fortresses dropping 20,000 pounds of bombs in an attempt to smother the bridge with explosives. The crews reported it to be "sagging, but not destroyed". This attempt was repeated without success and then the task was passed to the Mitchell medium bombers whose crews, between 3rd and 18th October, made 19 sorties. Finally, after the last of these attacks, a photo-reconnaissance pilot brought back the photograph that had been awaited for so long—a picture of the Kumusi at Wairopi showing the trestles on either bank of the river, but no bridge![3]

During the stand at Imita Ridge and the subsequent advance to Kokoda the air force had been battering the enemy's base on the north coast. Thus on 17th September, five days after No. 30 Squadron reached Port Moresby, its Beaufighters had been sent to attack a concentration of enemy barges at Sanananda Point and along Buna beach. The Beaufighter was new to the Japanese for whom the experience was a particularly bitter one. As the aircraft left the target, three of the barges were blazing fiercely, and others were seen to be on fire with their cargoes exploding. A pall of black smoke told of the damage that had been done. MacArthur sent a congratulatory message to the squadron on the success of the raid, ending with warm informality: "It was a honey!" The enemy's supply line on the Kokoda Track, the runway at Buna, store dumps, buildings, troop and gun positions, waterfront buildings and jetties at Lae, and coastwise patrols in search of small sea-going craft all provided targets for the Beaufighter crews. The squadron's first loss occurred on 23rd September when seven aircraft attacked anti-aircraft positions at Buna. An aircraft piloted by Flight Sergeant Sayer[4] with Sergeant Mairet[5] as his observer,

[2] The name Wairopi was a pidgin English corruption of "wire rope"; the bridge was suspended from wire ropes.

[3] Between 20th September and 20th October 80 aircraft sorties (38 by Airacobras, 19 by Mitchells, 15 by Kittyhawks and 8 by Flying Fortresses) were made in attacks on the bridge in which 76,000 pounds of bombs were dropped and more than 28,000 rounds of cannon and machine-gun ammunition fired.

[4] F-Sgt G. W. Sayer, 400212. 8, 84 Sqns RAF and 30 Sqn. Industrial chemist; of Toorak, Vic; b. Footscray, Vic, 6 Jun 1913. Killed in action 23 Sep 1942. (Sayer, who had served in the Middle East, was making his forty-ninth operational flight and had been one of a party who, in March, had escaped from Java to Australia in an open boat.)

[5] Sgt A. S. Mairet, 35940; 30 Sqn. Mine overman; of Glen Davis, NSW; b. Pilley, Yorkshire, Eng, 12 Jun 1912. Killed in action 23 Sep 1942.

was shot down by ground fire. In the course of this attack the Beaufighter pilots noted that about 75 per cent of the Japanese barges along the beaches in the area had been sunk.

On the same day, while a second formation of six Beaufighters was making an offensive sweep along the coast to Sanananda, nine enemy dive bombers escorted by six Zeros were sighted over Buna by the crew of one of the Beaufighters—Flying Officer Moran-Hilford[6] (pilot) and Sergeant Clark[7] (observer). Moran-Hilford turned his aircraft towards the Zeros and then dived almost to sea-level at 260 knots. Within a mile the Beaufighter had out-distanced the Zeros. The sturdiness of the Beaufighter was also noted with satisfaction on 1st October when Flight Lieutenant Willard[8] (pilot) and Flight Sergeant Nelson[9] (observer) flew back across the Owen Stanley Range on one engine after the other one had been stopped by fire from an anti-aircraft battery at Sanananda. The first strike made by the squadron in cooperation with American squadrons was made on 9th October when nine Beaufighters joined with a formation of Mitchells in a heavy attack on Lae in the course of which debris flying from an explosion in a dump near the wharf area struck a Beaufighter but the aircraft was not seriously damaged. On the 13th, Sergeant Butterfield[1] (pilot) and Sergeant Wilson[2] (observer) were killed when, while strafing enemy positions in the Owen Stanleys, their aircraft crashed into a hill near Kokoda. Again on the 27th another crew—Flight Lieutenant Jones[3] (pilot) and Flight Sergeant Richardson[4]—were lost when their aircraft crashed into the sea off Voco Point near Lae. Other pilots saw a trail of smoke coming from one of the Beaufighter's engines as it went down.

The fighting in the Owen Stanleys culminated in a particularly fierce engagement round the villages of Oivi and Gorari where the Australians, commanded by General Vasey, delivered the final blow. While this battle was at its height on 9th-10th November, American Bostons of No. 89 Squadron gave the Australians close bombing and gunnery support while fighter-bombers strafed the Oivi-Gorari track, and loosed 80 20-lb bombs on the enemy's positions. These, however, were so well covered that effective penetration was very difficult.

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[6] F-Lt D. J. Moran-Hilford, 3613. 30 and 31 Sqns. Regular airman; of Melbourne; b. Canterbury, Vic, 3 Jan 1916.

[7] F-O W. G. Clark, 40775. 30 and 100 Sqns. Insurance clerk; of Springvale, Vic; b. Footscray, Vic, 29 Apr 1923.

[8] F-Lt W. E. Willard, 472. 30 and 31 Sqns. Regular air force offr; of Waverley, NSW; b. Sydney, 4 Feb 1921. Killed in action 30 Aug 1943.

[9] F-Lt R. T. Nelson, 5832. 21, 22, 30 and 36 Sqns. Railway employee; of Punchbowl, NSW; b. Merriwa, NSW, 18 Aug 1920.

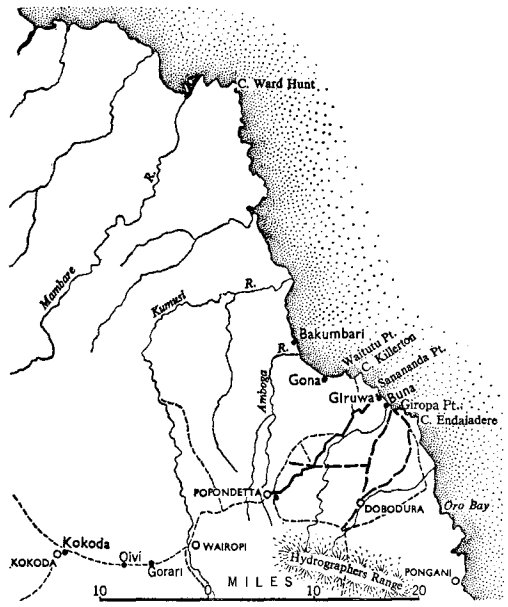
[1] Sgt T. I. Butterfield, 416205; 30 Sqn. Share farmer; of Wunkar, SA; b. Renmark, SA, 24 Jul 1915. Killed in action 13 Oct 1942.

[2] Sgt J. R. Wilson, 40196; 30 Sqn. Clerk; of Brighton, Vic; b. Oakleigh, Vic, 24 Jul 1922. Killed in action 13 Oct 1942.

[3] F-Lt E. A. Jones, 270808; 30 Sqn. Bank officer; of Morningside, Qld; b. Brisbane, 8 Oct 1914. Killed in action 27 Oct 1942.

[4] F-Sgt E. R. Richardson, 22750. 22 and 30 Sqns. Clerk; of Toowoomba, Qld; b. Toowoomba, 6 Jul 1920. Killed in action 27 Oct 1942.

Strong indirect support was being given meanwhile by No. 30 Squadron's Beaufighters which made repeated low-level sweeps over Popondetta, Soputa, Sanananda Point, Buna, Giropa Point, and along the coast over the mouths of the Amboga and Mambare Rivers and by Mitchells which bombed the Buna building area and aerodrome.



When defeat finally came in the Oivi-Gorari sector on 13th November, Horii, with most of Yazawa's surviving troops, unable to cross the Kumusi because the bridge had been destroyed, attempted to raft down the river to the sea. Horii himself, with a number of his staff, was drowned in the racing flood which also claimed many of his troops; others were shot by Papuan Infantry Battalion patrols who kept a close watch near the river's mouth.

New Guinea Force Headquarters now arranged for the dropping of supplies on a patch of kunai grass near Wairopi. On the 14th aircraft flew in and dropped steel wire rope and tools. The engineers had also requested that empty drums be dropped for use in their difficult bridging operations but the pilots thought that the risk in dropping these through the slip-stream of their aircraft was too great. Despite the lack of drums the engineers spanned the stream first by flying-foxes and then with a small suspension bridge which enabled the Australian troops to cross and pursue the fleeing Japanese.

It was at this stage that the naval battle of Guadalcanal was fought, as already noted, with considerable losses to both sides, but with a crippling result for the Japanese land forces who were deprived of heavy reinforcements when, on 14th-15th November, eleven of their transports were sunk. The significance of this naval engagement was expressed in a captured Japanese document which summed it up with the comment:

> It must be said that the success or failure in recapturing Guadalcanal Island, and [the outcome of] the vital naval battle related to it, is the fork in the road which leads to victory for them or for us.

At Port Moresby the R.A.A.F's No. 9 Operational Group had been working at full pressure during these operations and in close harmony

with Whitehead's Advance Echelon of the Fifth Air Force. As Garing saw the group's purpose it was that of a mobile task force for service with the forward elements of the main Allied forces—a role for which he, as commander, was admirably suited. In organisation, as he saw it, the immediate objective was a seven-squadron formation.[5] At the end of October he had under his command only four of these units—a torpedo-bomber unit (No. 100 Beaufort Squadron), a long-range fighter unit (No. 30 Squadron), an attack bomber, or, as the R.A.A.F. termed it, "intruder" unit—No. 22 (Boston) Squadron only then moving in from the mainland—and a general reconnaissance unit—No. 6 (Hudson) Squadron which had moved from Horn Island that month. The other three squadrons Garing considered necessary to give his force tactical balance were a dive bomber unit, and two escort fighter squadrons, one for medium-altitude and one for high-altitude operations.[6]

In No. 1 Rescue and Communication Flight, the R.A.A.F. in New Guinea had its most unusual operational unit. Its strange assortment of light aircraft was as varied and as appropriate to its task as was the flying record of its commander, Squadron Leader Pentland.[7] A pilot with the R.A.F. in the 1914-18 War, in which he was credited with having shot down 23 German aircraft, Pentland at 48 was probably the oldest R.A.A.F. pilot serving in an operational area. Between the wars he had flown as a pilot with the original Australian National Airways, which was owned and operated by Charles Kingsford-Smith and Charles Ulm, and was himself later closely identified as a pilot with the development of commercial flying in New Guinea, the stimulant to which was the need for air transport to the goldfields round Wau and Bulolo. Leading his unit, Pentland was now flying to and from remote, often improvised, air strips some of them inaccessible to other types of aircraft and pilots less skilled in flying in this tropical mountainous country with its vagaries in weather. He organised the successful rescue of the crews of an American Marauder and three Dauntless dive bombers which had crash-landed in the Upper Ramu Valley, and the evacuation of civilians and troops. Under Pentland's direction aerial surveys were made from which light aircraft and emergency air strips were constructed at Bena Bena, Abau, Kulpi, Hood Point, Cape Rodney, Huiva and Rami. By the end of 1942 the unit had carried about 15,000 pounds of supplies to outposts, had rescued 75 civilians and servicemen, and had carried many sick and wounded troops.

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[5] Letter from CO No. 9 Ops Group to HQ North-Eastern Area, 27 Oct 1942.

[6] Ancillary units in the group included No. 4 Fighter Sector and No. 10 Signals Unit, both based on Port Moresby. There were six subsidiary RAAF radio stations in the New Guinea area—Nos. 29, 37, 40, 50, 138 and 305. Other ancillary units that were administered by a Base Wing (No. 21) included No. 33 Transport Squadron (at Ward's), and three operational base units—No. 41 at Eleven Mile, No. 42 at Ward's, and No. 43 at Gurney, Milne Bay. No. 3 Medical Receiving Station, one of the "pioneering" medical units in New Guinea, was performing service of inestimable value. Planned as a mobile, self-contained specialist hospital unit its army parallel was the casualty clearing station.

[7] Sqn Ldr A. A. N. D. Pentland, MC, DFC, AFC, 271547. (1914-18: 12 LH Regt and 19 and 87 Sqns RAF.) Instructor at elementary flying training schools 1940-42; comd 1 Rescue and Communication Flight 1942. Pilot and later planter; of Goroka, TNG; b. Maitland, NSW, 5 Aug 1894.

Air support with a variation—tactical reconnaissance, the oldest type of air support in military history—was actively reviewed in New Guinea about this time. On 27th September, on the eve of his departure from New Guinea, Rowell informed Blamey that there was a need for army-cooperation aircraft working continuously on tactical reconnaissance. He recommended that at least one flight of No. 5 Army Cooperation Squadron, and a squadron of Bostons, be sent to Port Moresby. Brigadier-General Walker said that he could accommodate these units and Blamey supported the recommendation.

On 6th October Blamey made a similar request: for an army-cooperation squadron armed with comparatively slow aircraft. He quoted Walker as suggesting a squadron equipped with Wirraways, Boomerangs and Tiger Moths. Next day he learnt that No. 4 Squadron, with Wirraways, would be sent to Port Moresby as soon as possible. This proposal met with some opposition at General Headquarters. The Wirraway, it was held, was obsolete, and if intercepted by Japanese fighters casualties would be high. The most reliable observation could be obtained by modern fighter aircraft operating in flights of three, and such aircraft would be able to meet enemy aircraft in combat. Blamey agreed that the evidence indicated the unsuitability of the Wirraway but said that this type would be acceptable if none more suitable was available. An answer to this problem, he said, might be the re-equipment of No. 4 Squadron with the new Boomerang aircraft that the Commonwealth Aircraft Corporation was then producing, but the squadron was required urgently. MacArthur told Blamey that he had been informed that it was unlikely that Boomerangs would be available for service within three months and the squadron, equipped with Wirraways, would therefore be transferred to New Guinea as early as possible.

The first three aircraft reached Port Moresby on 7th November, one of them flown by the squadron's commander, Squadron Leader Quinan.[8] By the 21st, the unit had been established at Berry aerodrome, outside Port Moresby, with 18 Wirraways on its strength. Its tasks were aerial reconnaissance, photography, artillery spotting, message and supply dropping, strafing and dive-bombing and distribution of propaganda leaflets. To this "maid-of-all-work" list was added weather reconnaissance which, in fact, was the object of the first sorties flown. Supply dropping, so vital to the Australian troops on the Kokoda Track, was very largely dependent on favourable weather. Wirraway pilots therefore sortied in the Kokoda Gap—the true gap, which was an air route between the mountain peaks at an altitude of 7,500 feet instead of about 12-13,000 feet, the altitude that was needed to pass over the main range. Here they circled, signalling weather reports back to base and advising New Guinea Force Headquarters whether it was safe for aircraft to land at Kokoda. The squadron's first accident report was filed on 21st November when the crew

[8] Sqn Ldr G. J. Quinan, 129. 4 Sqn; comd 4 Sqn 1942, 5 Sqn 1942-43. Regular air force offr; b. 16 Apr 1915.

of a Wirraway on reconnaissance over Wairopi, Flying Officer Saunders[9] (pilot) and Flight Sergeant Bain[1] (observer), were forced to make a crash landing on the Wairopi strip. The aircraft was completely wrecked but the crew escaped injury and walked to Kokoda whence they were brought back to Port Moresby. On the 24th the squadron was given its first attack mission: two flights of three aircraft, each carrying two 250-lb bombs and 1,200 rounds of .303-inch ammunition, strafed and dive-bombed targets in the Gona area. One aircraft returned with engine trouble but the other five completed their task effectively.

The Goodenough operation fitted the pattern of Kenney's plan which, under the code-name GULLIVER, he proposed to MacArthur in a letter on 2nd November, the day Kokoda was re-occupied. His eagerness to prove the validity of his air-war concept was intense. Both tactically and strategically his mind was actively probing the future, in which the elimination of the Japanese on the Papua-New Guinea north coast was but a first step:

> Tanks and heavy artillery can be reserved for the battlefields of Europe and Africa (he wrote with typical overstatement in a letter to General Arnold on 24th October). They have no place in jungle warfare. The artillery in this theatre flies, the light mortar and machine-guns, the rifle, tommygun, grenade and knife are the weapons carried by men who fly to war, jump in parachutes, are carried in gliders and who land from air transports on ground which air engineers have prepared. These engineers have landed also by parachute and glider with airborne bulldozers, jeeps and light engineer tools . . . the whole operation preceded and accompanied by bombers and fighters. . . .

He had watched the Japanese use island bases to devastating effect and he firmly believed that he could use them better than they. In the same letter to Arnold he declared:

> In the Pacific theatre we have a number of islands garrisoned by small forces. These islands are nothing more or less than aerodromes, or aerodrome areas from which modern fire-power is launched. Sometimes they are true islands like Wake or Midway, sometimes they are localities on large land masses. Port Moresby, Lae and Buna are all on the island of New Guinea, but the only practical way to get from one to the other is by air or by water: they are all islands as far as warfare is concerned. Each is garrisoned by a small force and each can be taken by a small force once local air control is secured. Every time one of these islands is taken the rear is better secured and the emplacements for the flying artillery are advanced closer and closer to Japan itself.

This, then, was the backdrop to Kenney's GULLIVER plan: strong fighter bases at Milne Bay, on Goodenough and in the Buna area; bases that, though primarily for fighters would also have accommodation, as had Port Moresby, for the staging of all classes of bombers, whose range would be extended and bomb-loads increased.

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[9] Sqn Ldr T. H. H. Saunders, 406960, 4 and 5 Sqns. Warehouse assistant; of Cottesloe, WA; b. Cottesloe, 11 Nov 1922. Killed in aircraft accident 15 Mar 1952.

[1] Sgt D. E. W. Bain, 21899; 4 Sqn. Clerk; of Marrickville, NSW; b. Glasgow, Scotland, 3 Sep 1916. Killed in action 11 Dec 1942.

MacArthur cautiously gave his consent to GULLIVER as a basis for future planning. Part of that initial plan was already well in hand. Milne Bay had been transformed. Engineers, medical officers and administrators had cooperated to conquer the mud, malaria and confusion that had so recently threatened to deny victory to the defenders. No. 1 and No. 3 Strips had been developed as originally planned. No. 2 Strip presented insuperable drainage problems and was abandoned, but another was developed in its place so that the base now had three good runways with revetment areas. By 3rd November there were three American squadrons (two fighter and one heavy bomber) and one Australian unit —No. 100 (Beaufort torpedo-bomber) Squadron—based there. These, with the various ancillary units, were as much as the base could accommodate, although No. 6 Squadron, then based at Port Moresby, maintained a detached flight there to reduce the range for their vital long-range reconnaissance flights. For the rest, formations of bombers frequently staged through the base on long-range missions.

A few days after the defeat of the Japanese at Oivi-Gorari the 16th and 25th Australian Brigades were marching on Sanananda and Gona respectively, and the Americans of the 32nd Division were moving against Buna from their airfield to the south. At this stage Beaufighter attacks were being made at low level over strongly fortified enemy positions for the specific purpose of diverting the fire of the anti-aircraft batteries from Marauder formations that were following in to make low-level bombing attacks. Wing Commander Walker, in his tactical appreciation for November, noted that, although on these operations the Beaufighter crews had not themselves encountered heavy fire from the ground batteries, it appeared that they had put the enemy gunners on the alert for the impending bombing attack. Thus, instead of diverting the fire, the Beaufighters were increasing the risk run by the bomber crews. Accurately timed dawn and dusk attacks, he reported, appeared to be the most effective way of employing strafing aircraft over well-defined positions.

In the November operations the most spectacular and profitable attacks were those made on grounded aircraft and aerodrome installations at Lae. On the 17th six Beaufighters, with fighter cover, surprised the Japanese and before their batteries were properly in action two Sally bombers were attacked and a number of troops running from them for cover were killed; four Zeros were hit—one when attempting to take off—and an encampment at the north-west end of the aerodrome was thoroughly strafed. Next day eleven Beaufighters followed a formation of Bostons from No. 89 Squadron in to the target in another attack on Lae which had comparable results. On this second attack Walker's aircraft, in which the observer was Flying Officer Mason,[2] was hit in the tail by a bursting shell. Walker got the aircraft back to base and made a successful wheels-up landing without further serious damage. Another aircraft had to make a crash landing. No member of either crew was injured.

[2] F-Lt J. W. Mason, 263498. 12 and 30 Sqns; Staff Offr Navigation RAAF HQ 1943-44, Overseas HQ 1945. Bank clerk; of Parkes, NSW; b. Yass, NSW, 6 Nov 1916.

After a similar operation over Lae on the 22nd three of six unescorted Beaufighters that made the raid were attacked by Zeros from whom they were able to draw away in straight and level flight at almost sea level at an indicated speed of between 255 and 260 knots. Later the same day, after a similar attack in which the American Bostons took part, Zeros again intercepted. On this occasion a Beaufighter manned by Flight Lieutenant Little[3] (pilot) and Flying Officer Spooner[4] turned on a Zero that was attacking two other Beaufighters. Little's cannon fire caught the enemy aircraft, which was last seen trailing smoke from its engine. In a dawn attack on Lae on 29th November in collaboration with No. 89 Squadron Bostons the first two of four Beaufighters taking part were over the target before the Japanese ground batteries opened fire; evidence that supported Walker's submission on the timing of these attacks.

A contribution quite as notable as that of No. 30 Squadron was now being made by the more recently arrived intruder squadron, No. 22, armed with Bostons. A ground party which arrived at Port Moresby on 19th October had a camp ready close to No. 30 Squadron's camp near Ward's aerodrome when the aircraft arrived early in November. The immediate operations program closely resembled that for No. 30 Squadron with which the new unit therefore had much in common: the principal distinction for operational purposes was that the Boston carried bombs and had a crew of three whereas the Beaufighter relied on heavy fire-power from cannon and machine-guns and was manned by a crew of two. Even so the range of targets provided for the Bostons was practically identical with that for the Beaufighters.

Early in its service career the squadron, commanded by Squadron Leader Bell, suffered severely from the loss of nine of its aircrew and three of its aircraft as a result of three successive explosions while the Bostons were making their bomb runs. The first of these occurred on 11th November when an aircraft piloted by Flight Lieutenant Morgan was engaged in practice bombing over a wreck that lay just outside Port Moresby Harbour. At the time the accident was unexplained, as was the loss of the second aircraft. One of five Bostons that were on a bombing and strafing raid over Buna aerodrome on 26th November, this bomber, piloted by Squadron Leader McDonald,[5] had just begun its bomb run when it was blown to pieces by an explosion that at first was thought to have been caused by anti-aircraft fire. Three days later when about to bomb ground positions in the Gona area, the third Boston, piloted by Flight Lieutenant Bullmore,[6] blew up in almost precisely similar circumstances. On each occasion the bomb-load had been the same—20-lb

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[3] W Cdr R. A. Little, DFC, 290491. 30 Sqn; comd 1 Sqn 1945. Regular air force offr; of South Perth, WA; b. Perth, 11 Jun 1916.

[4] F-Lt A. H. Spooner, DFC, 3490. 12, 30 and 37 Sqns. Regular airman; of Perth, WA; b. Northam, WA, 20 Dec 1918.

[5] Sqn Ldr K. R. McDonald, 250430; 22 Sqn. Commercial traveller; of Mulwala, NSW; b. Corowa, NSW, 5 Feb 1917. Killed in action 26 Nov 1942.

[6] F-Lt H. J. Bullmore, 402045: 23 Sqn RAF and 22 Sqn. Grazier; of Nowra, NSW; b. Sydney, 29 Jun 1915. Killed in action 29 Nov 1942.

fragmentation bombs. This fact linked with the fact that the first aircraft had been lost in practice, so eliminating any question of ground fire as a cause, led to the conclusion that the bombs were so light that, when released into the slipstream in a cluster, one or more would be blown back against others and, by concussion, the whole load would be detonated into a fierce explosion in which neither the crew nor the aircraft could possibly survive. The loading of these bombs was immediately discontinued and the absence of any further explosions of the kind was accepted as proof of this theory. An operation in which bombs of the same weight were used without disastrous results for the Bostons was undertaken on 16th November when three aircraft dropped 16 20-lb bombs directly on the stern of a wrecked ship off Waitutu Point that was thought to be used by the Japanese as a stores depot.

G.H.Q. Operations Instruction No. 12, dated 1st October, had assigned to the R.A.A.F. general reconnaissance, bomber and torpedo squadrons the responsibility for keeping open the sea lanes to New Guinea; for "effecting the maximum possible dislocation" of Japanese shipping, supply lines and sea communications; and for maintaining constant reconnaissance of all "hostile sea approaches to New Guinea within range". The burden of this huge task was shared by No. 6 Squadron and No. 100 Squadron. In addition to daily searches, the two units conducted innumerable anti-submarine patrols on which crews were airborne for many hours. The strain imposed by these long-range operations, flown practically without navigation aids, frequently through rain storms and heavy cloud, over sea and land that was under enemy control, was very great. Yet, supported by ground staffs as enduring as themselves, the crews maintained an almost inflexibly high standard and achieved considerable success.

At times the tedium of their long "clearing" searches was sharply interrupted, as when, on 26th September, three Hudson crews in the vicinity of Woodlark Island sighted an enemy ship of about 500 tons that was believed to have a radio station on board. Two of the aircraft, one piloted by Flying Officer Shore, and the other by Flight Lieutenant Hitchcock, promptly dropped eight 250-lb bombs, each aircraft obtaining a near miss. The ship appeared to have stopped so the Hudson crews flew in to strafe it. Later in the day another Hudson piloted by Flight Sergeant Wheeler,[7] having led four Beaufighters of No. 30 Squadron to the disabled ship, dropped four 250-lb instantaneous bombs from 1,000 feet, and scored two direct hits and a near miss; these blew away the bridge and mainmast and appeared to hole the hull at water level. The Hudson and the Beaufighters then attacked with machine-gun and cannon fire setting the ship on fire and sinking a lifeboat with four men in it. A reconnaissance crew next day reported no sign of the ship which was presumed to have sunk.[8]

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[7] F-Lt W. A. Wheeler, DFC, 404841. 6 and 32 Sqns. Salesman; of Lismore, NSW; b. Sydney, 31 Jan 1911. Died 22 Aug 1958.

[8] The sinking is not recorded in the Joint Army-Navy Assessment Committee's post-war record of shipping losses.

On the night of 3rd-4th October Wing Commander Balmer, commanding No. 100 Squadron, led ten of his Beaufort crews on one of the unit's most ambitious, exacting and, as it proved, disappointing attack missions. The target, a concentration of enemy ships sheltering in waters near Buin-Tonolei, off the Shortland Islands, was to be attacked with torpedoes by moonlight. Airborne about 1 a.m., the formation set out on its flight of 420 nautical miles, flying at 1,000 feet in moderately fine weather. Approaching the target rain squalls were encountered, in the last of which, apparently, two aircraft lost contact and the remainder were separated into two flights, one of which entered the target area to the east of the Shortlands and the other (as planned) to the west. It was now about 4 a.m. Height had been reduced to about 200 feet and navigation and formation lights had been extinguished. The eight aircraft went in to attack, flying independently, each crew looking for its own target. Seven each found a ship and released their torpedo. At least four of these were observed by the rear gunners of the aircraft from which they had been dropped to be making good runs towards their targets. No hits were observed but the moon had become clouded and the crews considered it improbable that they had missed completely with all torpedoes. Two cruisers opened fire belatedly, indicating that the enemy had been unaware of the Beauforts' approach. One enemy fighter was seen but there was no interception. To their disappointment at the apparent failure of the strike there was added for the crews a personal bitterness; four of their comrades—Flight Lieutenant Stumm (pilot), Flying Officer Hendy[9] (observer) and Sergeants Hale[1] and Walker[2] (wireless air gunners)—did not return. With their aircraft they were posted missing and presumed lost. None of the other crews had any sure knowledge of their fate. The failure of the mission, on which the Beauforts had flown 950 nautical miles, was enquired into closely and a detachment of the squadron was withdrawn for further torpedo training. Even so it was agreed that the failure was due to defects in the torpedoes rather than lack of efficiency on the part of the crews.

Throughout October the long reconnaissance flights continued. Occasionally there was action. Over St George's Channel, near Rabaul, on the 11th a Hudson crew captained by Flight Lieutenant Manning made a spirited attack on a 10,000-ton ship that had been converted into an aircraft tender and had a full deck cargo including at least 12 Zeros. From 900 feet the Hudson crew obtained two direct hits and one near miss with 250-lb bombs. The ship lost way and dense smoke rose from her decks.

First priority in operations necessarily was given to attacks on enemy ships approaching Buna. The Japanese missed no opportunity to take

[9] F-O K. R. Hendy, 408652; 100 Sqn. Journalist; of Melbourne; b. Geelong, Vic, 20 Jun 1915. Killed in action 4 Oct 1942.

[1] Sgt C. C. Hale, 405679; 100 Sqn. Butcher; of Capella, Qld; b. Barcaldine, Qld, 19 Mar 1921. Killed in action 4 Oct 1942.

[2] Sgt A. A. Walker, 406907. AIF and 100 Sqn. Engine fireman; of Victoria Park, WA; b. Esperance, WA, 5 May 1917. Killed in action 4 Oct 1942.

cover when the weather and darkness offered it. For this reason the more aggressive of the American heavy bomber captains were bombing from low levels. A somewhat extreme example of this was provided on 24th November when Captain Kenneth McCuller, the commander of one of seven Flying Fortresses sent to attack five Japanese destroyers in the Huon Gulf, made his first bombing run at only 200 feet. When anti-aircraft shells hit and started a fire in the tail of the aircraft, McCuller pulled out while the tail gunner smothered the flames, and then turned in for another attack. On this run three members of the crew received slight wounds. In a third run an engine was hit. Still McCuller kept on bombing. In the fourth attack a second engine was put out of action. The crew claimed hits on at least two destroyers. That night 9 Beauforts from No. 100 Squadron were sent out from Milne Bay on a combined bombing and torpedo strike against these ships, each of five carrying a torpedo and each of four two 500-lb and two 250-lb bombs.

It was a difficult assignment—the first of its kind for the squadron. Four aircraft failed to find the target in the darkness and cloud. One crew found a destroyer on fire with other destroyers standing by and made a torpedo attack but observed no results. The crews of two other Beauforts also sighted three destroyers on one of which a direct bomb hit was claimed. The remaining two Beaufort crews also reported sighting a burning destroyer which was later seen to blow up. This was later proved to have been one of the destroyers attacked by the Flying Fortress; McCuller's determination had paid a deferred dividend. One of the Beauforts, piloted by Sergeant Duncan,[3] did not return. Next day it was learned that Duncan had put the aircraft down near Cape Vogel, on the shore of Collingwood Bay, and that, though injured, the crew were able to make their way to Wanigela. Early in the day the enemy destroyers were assigned to Hudsons of No. 6 Squadron also as a target. The commanding officer, Wing Commander Barlow,[4] led six aircraft off to find them. Barlow was forced by mechanical trouble to return and make a crash landing at the Seven Mile—now known as Jackson's—which he did without injury to crew or himself. The other five crews found the probable target area weather-bound and so did not sight the enemy ships.

For No. 100 Squadron the night's operation was preceded by an incident in which quick and courageous action by the squadron torpedo officer, Pilot Officer Temple,[5] and men of his section prevented disaster. One Beaufort, in which a torpedo had been mounted, caught fire when the engines were started up in the dispersal bay before moving out for take-off. Temple and his assistants ran to the burning aircraft and at considerable risk removed the torpedo from its rack.

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[3] F-Lt J. R. Duncan, 406777. 7 and 100 Sqns. School teacher; of Terwonga, WA; b. Wabin, WA, 18 Oct 1920.

[4] Gp Capt A. A. Barlow, 250159. Comd 2 AOS 1941, 1941-42, 6 Sqn 1942-43, 1 SFTS 1943, 6 SFTS 1943-44, 7 OTU 1944-45. Commercial pilot; of Hobart; b. Melbourne, 23 Dec 1907.

[5] F-O R. A. J. Temple, MBE, 1102. Comd 1 TMU 1942. Regular airman; of Williamstown, Vic; b. Williamstown, 18 Jan 1914.

If they were unable to sink the ships with which the Japanese were striving to reinforce their Buna-Gona beach-head, Allied aircraft on long-range armed reconnaissance were certainly checking them. At the end of November these aircraft forced four enemy destroyers (later known to have been carrying 800 troops) to turn back to Rabaul after they entered Vitiaz Strait.[6] Early on the morning of 2nd December the crew of a Beaufort piloted by Sergeant Green[7] found four destroyers well south in the Bismarck Sea and approaching Buna. Base Operations at Milne Bay instructed Green to "shadow to the limit of endurance and attack". Green shadowed the destroyers but, after two hours, when about to make an attack, his aircraft was itself attacked by three Zeros. His gunners claimed one probably shot down and one damaged before the enemy pilots broke off the fight.

Back at Port Moresby six Beaufighters took off to attack the ships jointly with a formation of Flying Fortresses, but the rendezvous, for some reason not explained, was not kept and the ships were not sighted. That night, with a Hudson piloted by Squadron Leader Colquhoun accompanying them to illuminate the target with flares, the Beaufighters found the destroyers. The crews reported that the glare from the flares and the flashes from their own cannon were so strong that the pilots could not clearly see the target and so were forced to make their attacks from the unusually high altitude of 1,000 feet. The results were not observed. As the Beaufighters were leaving the target area six Beauforts came in to make a torpedo attack by the light of flares. Flying Officer Forrest[8] sighted three or four destroyers and released a torpedo from 200 feet at 1,200-yards range and at least two other torpedoes were released. An explosion reported later by one of the Beaufighter crews gave the impression that an aircraft piloted by Flight Lieutenant Birley[9] had scored a hit and he and his crew were credited with a "probable". Three Bostons of No. 22 Squadron attacked with bombs earlier in the night without noticeable result.

Though most disappointing, these attacks did have the effect of forcing the destroyers to move north to the mouth of the Kumusi River where they disembarked the men into barges before withdrawing, still in darkness. Early next morning the Beaufighter crews were able to make up for their lack of success in their night attack. Flying low along the coast they caught the enemy barges before they had beached, and, with a deluge of cannon and machine-gun fire, sank several barges and killed many troops, the number of enemy dead being estimated at 300.

Again, on 10th December, Allied aircraft intercepted and turned back to Rabaul another enemy convoy—six destroyers—which, however, sortied

[6] This convoy had left Rabaul on the night of 28th-29th November.

[7] F-Lt C. R. Green, CGM, 416212. 100 and 8 Sqns. Student; of Lenswood, SA; b. Forest Range, SA, 23 Apr 1918.

[8] F-O D. J. Forrest, 406837; 100 Sqn. Farm machinery mechanic; of Cottesloe, WA; b. Perth, WA, 16 Apr 1920. Killed in action 21 May 1943.

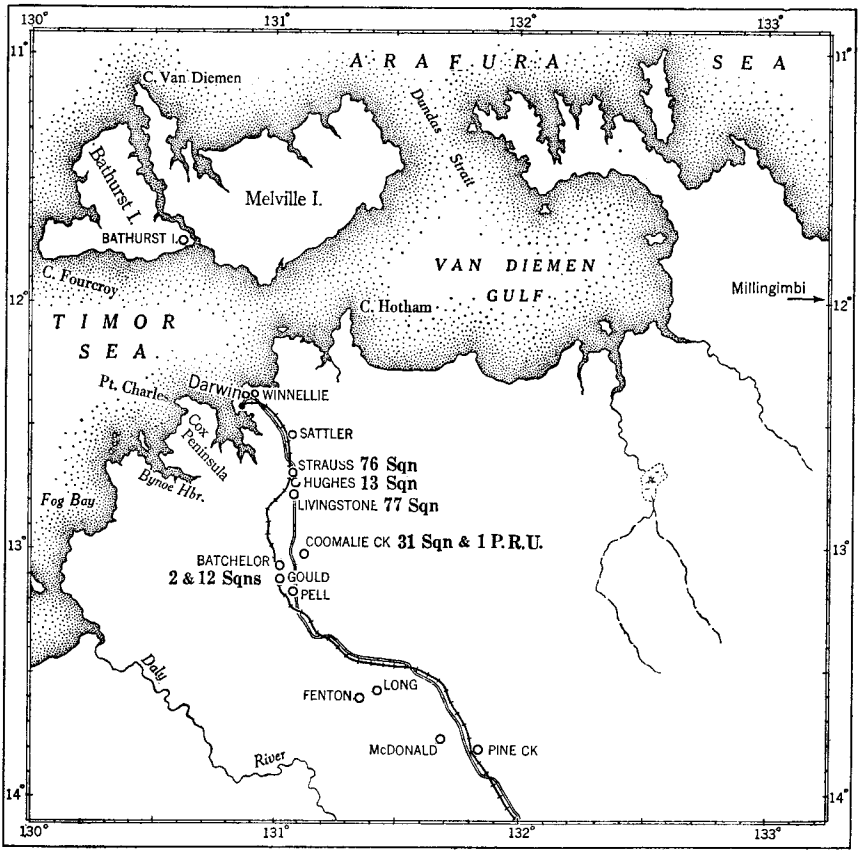
[9] Sqn Ldr H. E. Birley, 260631. 13 and 100 Sqns; RAAF Cd 1945. Accountant; of North Sydney; b. Sydney, 22 Mar 1915.

once more on the 12th, and reached the mouth of the Mambare River before daylight on the 14th. On this occasion low overcast and some rain aided the Japanese but some warning of the approach of the ships was received in the operations room at Port Moresby and seven Bostons of No. 22 Squadron and a formation of Flying Fortresses took off to attack. Both formations bombed and one destroyer was believed by the crews to have been damaged. The aircraft then turned their attention to the beach-head where the enemy troops were already ashore and where the waterfront was littered with hurriedly piled equipment and stores while drums lashed together pontoon-fashion floated in the water alongside beached barges. Thereafter throughout the day formation after formation of Allied aircraft attacked—Australian and American Bostons, Beaufighters, Mitchells, Marauders and Airacobras. Great damage to the beached equipment was done by bombs and gunfire and barges were sunk. Heavy and medium bombers sought out and harassed the ships of the retiring convoy. In this one day Allied aircraft made 96 attack sorties against the enemy's new beach-head and spent thousands of pounds of bombs and more than 130,000 rounds in gunnery—the Beaufighters alone fired 2,500 rounds of 20-mm and 71,000 rounds of .303-inch ammunition. Even so, the Japanese had achieved their immediate objective; they had put ashore another 800 troops without any great loss of life.

In North-Western Area during August the two hard-worked Hudson squadrons—Nos. 2 and 13—had continued their task of harassing the enemy's bases in the islands north of the Arafura and Timor Seas, and supporting the guerilla force on Timor. The need for support for Sparrow Force was now more urgent than ever because in August the Japanese opened a determined offensive aimed at enveloping and destroying the Australian-Dutch force. Several converging columns of enemy troops were on the move and a party was landed at Beco. The convoy which carried these Japanese troops to Beco provided the Hudsons with a good target. Wing Commander McFarlane led nine Hudsons of No. 2 against two ships escorted by a destroyer off Suai in the early morning of 7th August. The squadron attacked from 6,000 feet and one transport was set on fire. On the 10th nine Hudsons of No. 13 attacked three transports off Beco. They made three direct hits on a ship of 4,000 to 5,000 tons and two direct hits on a smaller one, which probably sank. Two Hudsons then bombed and probably hit a destroyer which was towing a small motor vessel and caused it to cast the towed vessel off. On the 13th No. 13 bombed barges at Beco.

During the remainder of August Hudsons were over Timor almost every day dropping supplies and attacking Japanese positions. Thus on 21st August five Hudsons of No. 2 set out to support the hard-pressed troops on Timor by attacking Maubisse. Bombs were dropped on the town and the Hudsons then reconnoitred the roads in the area. Two

Zeros attacked and set on fire a Hudson captained by Flying Officer Wadey,[1] who was able to bale out before the machine crashed into the side of a hill. This Zero then made seven unsuccessful attacks on the Hudsons which all remained in close formation except for one captained by Flying Officer Badger, who flew towards thin cloud, pursued by the second Zero. Badger evaded the Zero by flying low along the valleys until he reached the sea. There the Zero attacked again but was shot down



Squadron dispositions, December 1942

into the sea at 50-yards range. Wadey, badly burnt, was found by natives who carried him in a chair to men of Sparrow Force; later he was returned safely to Darwin.

After a pause of more than three weeks Japanese aircraft were over the Darwin area nine times in the last nine days of August. On the 23rd 27 heavy bombers struck Hughes, destroying fuel and ammunition

[1] **F-Lt S. G. Wadey, 407068. 6,** 14 and 2 Sqns. Accountant; of Adelaide; b. Adelaide, 2 Apr 1918.

dumps and two aircraft. The bombers were escorted by from 12 to 20 Zeros which were engaged by 18 Kittyhawks of No. 49 Group. The American Kittyhawks scored their greatest success so far, and claimed 8 fighters and 4 bombers shot down. For the remainder of August the Japanese confined themselves to minor raids, all by night.

On 9th September the 2/4th Independent Company was ordered to Timor to reinforce the 2/2nd and its attached troops. The main body of the new company left Darwin in the destroyer *Voyager* on 22nd September and began to unload at Betano next day. She went aground and on the 24th Japanese bombers attacked. Later in the day the crew were taken off by two corvettes and the stranded vessel was destroyed.

The movement of Japanese shipping throughout the area was now providing frequent targets. Five Hudsons of No. 13 Squadron attacked two 300-ton ships off Tanimbar Island on the morning of 13th September, scoring a direct hit on one of them, which rapidly began to sink.

On 14th September three Hudsons of No. 2 led by McFarlane dive-bombed a ship off Saumlaki. McFarlane's bombs fell within 10 feet of the vessel. As the second Hudson was attacking, the third one, captained by Flying Officer McDonnell,[2] was hit by anti-aircraft fire and hurtled into the sea. The other aircraft attacked again and one of McFarlane's bombs hit the ship.

Three Hudsons of No. 2 Squadron bombed Dili on 25th September. One of them, with a hitherto untried crew led by Flying Officer James,[3] arrived over the target four minutes after the others and was attacked by two Zeros, James dodging from one cloud to another. After some minutes one Zero made a belly attack but was shot down by Sergeant Reilly.[4] Five minutes later over the sea north of Dili a second Zero was shot down by the turret gunner, Sergeant Reen.[5] Two Zeros continued to attack.

Thirty minutes after 1st attack (says the squadron diary) main wing tanks were practically empty, belly gun out of ammunition, also side guns, and a few minutes later turret reported to be unserviceable. Flying Officer James then dived for water on southerly course levelling out several feet above water, side gunner meanwhile taking 100 rounds from front guns. Zigzagged across Wetar Strait, side gunner using short bursts to ward off attacks from stern quarter. Turret gunner reported port gun serviceable again and fired short burst into Zero attacking from starboard quarter. Zero broke off attack and headed for Dili. Our aircraft on reaching coast of Timor flew through valleys close to ground and . . . Zero could only attack from dead astern. The turret gunner [Reen] was compelled to load port gun by hand, with the result that he tore most of the skin off his hands. . . . He was only able to fire single shots and odd bursts up to 5 rounds. . . . Zero was shaken off,

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[2] F-O K. L. McDonnell, 401656; 2 Sqn. Van driver; of Hawthorn, Vic; b. Dubbo, NSW, 20 Dec 1916. Killed in action 14 Sep 1942.

[3] F-O R. R. James, 408811. 4, 6 and 2 Sqns. Store manager; of Shepparton, Vic; b. Shepparton, 13 Apr 1912. Killed in action 28 Apr 1943.

[4] F-Lt H. Reilly, 414081. 2, 73 and 7 Sqns; Instructor 1 OTU 1944-45. Clerk; of Mackay, Qld; b. Ipswich, Qld, 19 Jul 1920.

[5] Sgt P. S. Reen, 412185. 7, 6 and 2 Sqns. Student; of Casino, NSW; b. Toowoomba, Qld, 15 Mar 1918. Killed in action 28 Apr 1943.

but midway across island showed up again 50 yards astern and turret gunner immediately fired short burst of 5 rounds into motor. Zero pulled away sharply and broke off engagement. . . . Proceeded at 0 feet towards Darwin, no further attack, the whole engagement taking 45 minutes.

In addition to James, Reilly and Reen, the crew included Sergeants Ryan[6] and Keech.[7]

No. 77 (Kittyhawk) Squadron had been formed at Pearce, Western Australia, in March 1942 and had been stationed in Western Australia until August when it began to move to North-Western Area. As had happened in the previous month, the Japanese did not launch a raid on North-Western Area until towards the end of September. On the 25th Berrimah and Livingstone were bombed, but little damage resulted. There were minor raids on the next two nights. All of No. 77 Squadron had now arrived and its commander, Squadron Leader Cresswell,[8] tried to intercept these night raiders. On the 25th he fired bursts at one of the bombers but evidently did not hit it.

In October Air Commodore Bladin's force was considerably strengthened by the addition of a second Kittyhawk squadron—No. 76—and No. 31 Squadron equipped with Beaufighters.

On Timor the Japanese continued to press the 2/2nd and 2/4th Independent Companies hard. The *48th Japanese Division* was arriving and would be complete early in November. Bands of natives led by Japanese were harassing the Australians and their native allies, and much of the effort of Nos. 2 and 13 was now aimed at discouraging the hostile Timorese and encouraging the friendly ones. Among the bombers' main targets were Aileu and Maubisse on the main Japanese line of advance southward from Dili, and the airfield at Koepang.

Three Hudsons of No. 2 Squadron (now commanded by Squadron Leader Moran[1]) attacked Koepang airfield from 16,500 feet at midnight on 24th October causing a big explosion. Next morning three other Hudsons were sent against Penfui. Two aircraft dropped their bombs on the runway but Pilot Officer Dunning's[2] Hudson lost formation while over the target and was not seen again.

Japanese bombers attacked Darwin several times in October but never with more than three aircraft, except on the 27th when nine bombers struck at the town. In that month Batchelor and Pell were bombed for the first time.

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[6] P-O R. D. Ryan, 404989. 7, 6 and 2 Sqns. Clerk; of Woolloongabba, Qld; b. Brisbane, 31 Dec 1916. Killed in action 28 Apr 1943.

[7] F-Sgt K. G. Keech, 8966. 24, 6 and 2 Sqns. Insurance representative; of Lismore, NSW; b. Orange, NSW, 10 May 1917. Killed in action 28 Apr 1943.

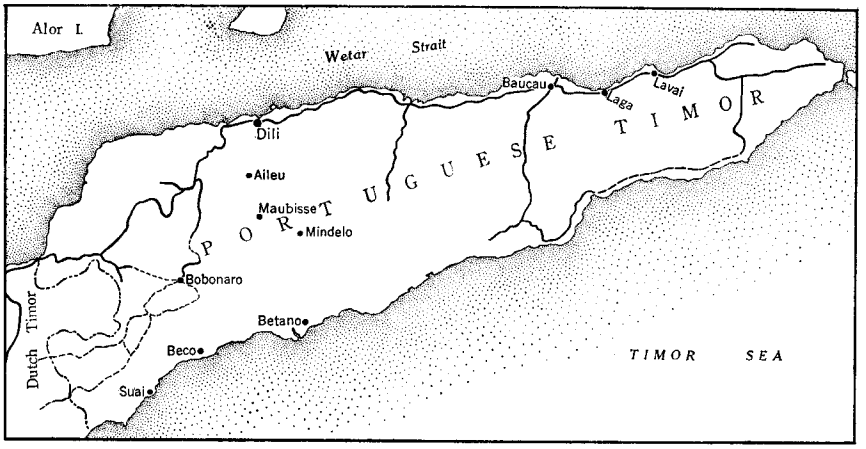
[8] W Cdr R. Cresswell, DFC, 402. Comd 77 Sqn 1942-43; CFI 2 OTU 1943-44; Wing Leader 1 Fighter Wing and comd 81 Wing 1944; Wing Leader 81 Wing 1944-45; comd 77 Sqn 1950-51. Regular air force offr; of Potts Point, NSW; b. Launceston, Tas, 27 Jul 1920.

[1] Gp Capt R. H. Moran, 83. Sigs Offr Central and Southern Areas 1940-42; comd 2 Sqn 1942-43, 13 Sqn and RAAF Stn Canberra 1943, 76 and 71 Wings and Aitape Air Task Force 1944; SASO Western Area 1944-46. Regular air force offr; of Narre Warren, Vic; b. Melbourne, 13 Sep 1914.

[2] P-O R. K. R. Dunning, 407317; 2 Sqn. Bank clerk; of Kimba, SA; b. Ramco, SA, 15 Oct 1916. Killed in action 25 Oct 1942.

November saw a big increase in the activity of the squadrons in North-Western Area. The Beaufighter squadron (Squadron Leader Read[3]) went into action, and visiting American Marauders from No. 22 Bombardment Group lent support over Timor. No American units now remained except No. 43 Service Squadron, to maintain the Kittyhawks, and since mid-October area headquarters had been entirely staffed by Australians.

On the night of 1st November 6 Hudsons of No. 13 Squadron and 9 American Marauders struck at Bobonaro and Dili in support of the commandos. On the 3rd 8 Marauders and 5 Hudsons bombed Dili, and, on the next few nights, targets at Bobonaro, Maubisse and Aileu were



hit. On the 17th the Beaufighters were over Timor for the first time, while Hudsons from Nos. 2 and 13 bombed Maubisse, Dili, Bobonaro, and Baucau.

This increase in the number of sorties against Japanese forward positions and bases in Timor, and particularly the strafing of road convoys by the Beaufighters, greatly encouraged the troops on the ground. The 2/2nd Independent Company had been in action for nine months and it was now decided to relieve them and at the same time bring off 190 Dutch troops and 150 Portuguese civilians. This led to a series of events in which the R.A.A.F. squadrons were closely involved. The plan was that the patrol boat *Kuru* (55 tons) and corvettes *Armidale* and *Castlemaine* should between them put ashore about 60 Dutch troops and take off the Dutch troops and Portuguese civilians at Betano on the night of 30th November and return for the Australians on the night of 4th December.

Castlemaine and *Armidale* were attacked by Japanese bombers on the morning of the 30th, and attacks continued at intervals throughout the day. They dodged the bombs, however, and Beaufighters of No. 31 Squadron arrived and drove off a force of 8 bombers and 6 fighters.

[3] Gp Capt C. F. Read, DFC, AFC, 220. 30 Sqn; comd 31 Sqn 1942-43, 1 SFTS 1943-44, 77 Wing HQ 1944-45. Regular air force offr; of Vaucluse, NSW; b. Sydney, 9 Oct 1918.

Kuru arrived at Betano, waited some hours for the corvettes, and, when they did not arrive, took aboard 77 Portuguese civilians and set out for Darwin. *Armidale* and *Castlemaine* were off Betano soon afterwards but when they received no reply to their signals they departed without putting their troops ashore. After dawn next morning *Kuru* met the corvettes and transferred her passengers to *Castlemaine*. Soon enemy bombers appeared. *Castlemaine* set about searching for two airmen from a missing Beaufighter, leaving *Armidale* and *Kuru* to complete the Timor operation, working independently.[4] Soon *Armidale* and *Kuru* were being attacked by bombers and at 3.15 p.m. *Armidale* was torpedoed and sunk, 350 miles from the Australian coast.

Some of the crew including the wounded set off for Darwin in the ship's motor-boat; 79 remained on an improvised raft and later managed to make use of a damaged lifeboat. For the next 10 days the Hudsons were busy searching for survivors, and, when they had been found, dropping supplies to them and guiding other naval vessels to them. It was not until the 9th that the corvette *Kalgoorlie* found the lifeboat; the raft was never found.

On three trips from the 10th to the 19th December the Dutch destroyer *Tjerk Hiddes* took the Dutch troops and the 2/2nd Independent Company off Timor. The route taken by the *Tjerk Hiddes* was worked out by the R.A.A.F. on the assumption, which proved correct, that Japanese air reconnaissance would adhere to its usual time-table.

In the last week of November the Japanese carried out three fairly heavy night raids on Darwin. Again and again in the last few weeks fighters of No. 77 Squadron had tried to intercept night raiders. On the night of the 23rd when 18 medium bombers were over the town, the squadron's persistence was rewarded: Squadron Leader Cresswell shot down a bomber, and later the wreck and the bodies of the nine members of the crew were found. On the 26th and 27th 12 Japanese bombers struck Hughes and Darwin, and at Hughes damaged two Hudsons.

The enemy was now bringing more aircraft forward to the Timor airfields. Whereas in November reconnaissance showed 62 aircraft in Celebes and 29 in Timor, in December there appeared to be 42 in Celebes but 62 in Timor; and there were signs that the Japanese were making a new airfield at Fuiloro 60 air miles closer to Darwin than Dili was. Henceforth Fuiloro became a main target for the Hudsons and Beaufighters.

The Beaufighters of No. 31 were now most active. On the 18th two of them sank a sailing vessel 25 miles north-east of Portuguese Timor. They opened a heavier offensive against Fuiloro and the Lavai-Laga area on 23rd December, and shot down one Japanese fighter.

On 24th December Nos. 2 and 13 Squadrons sent out four Hudsons to attack a destroyer and four transports off Lavai. No hits were scored

[4] The two airmen, P-O J. M. Morrison (pilot) and Sgt A. F. Forrest (observer), were never found.

but one Hudson of No. 13 Squadron, captained by Flying Officer Thomson,[5] was shot down. On the next two days No. 31 put 10 Beaufighters into the air to attack barges, stores and troops at Lavai and Laga.

Moran led out six Hudsons of No. 2 Squadron on the 27th to bomb stores at Lavai. While making their bombing run they were attacked by three Zeros but continued to the targets. One flight then proceeded to attack a second target but was again set upon by the Zeros which damaged one Hudson. This flight jettisoned its bombs. The first flight was then persistently attacked by the Zeros which shot down Flying Officer Johns'[6] aircraft in flames. The Zeros continued to attack for the next 15 minutes. As Flight Lieutenant Robertson's[7] Hudson was approaching cloud cover and flying at 400 feet above the sea the belly gunner put a long burst into a Zero at 50-yards range. The Zero was last seen falling away in flames. All the surviving Hudsons but one were hit but all returned safely.

The Darwin base had been steadily strengthened in the second half of the year. By December so many maintenance, radar and other units had arrived that No. 24 Base Wing and No. 34 Radar Wing were formed to relieve area headquarters of direct responsibility for them. On 24th December the squadrons were deployed thus:

Airfield	Squadron	Aircraft
Batchelor	No. 2	18 Hudsons
„	No. 12	6 Wirraways and 18 Vengeances
Hughes	No. 13	18 Hudsons
Coomalie	No. 31	24 Beaufighters
	No. 1 P.R.U.	1 Wirraway 4 Buffaloes 2 Lightnings 6 Lancers
Livingstone	No. 77	24 Kittyhawks
Strauss	No. 76	24 Kittyhawks

No. 12 was now being equipped (as indicated) as a dive-bomber squadron. No. 18 (Netherlands East Indies) Squadron, with Mitchells, was now arriving at McDonald, and would undertake its first sorties on 19th January. More important, Liberators of No. 319 Bombardment Squadron U.S.A.A.F. were soon to take up permanent residence at Fenton, whence they would greatly extend the reconnaissance and increase the striking power of the force.

Early in January it was decided to withdraw the 2/4th Independent Company from Timor. This operation went smoothly, the destroyer *Arunta* on 9th-10th January embarking all the troops except small Intelligence parties, which were removed next month.

[5] F-O G. P. Thomson, 405889; 13 Sqn. Shipping clerk; of Kedron, Qld; b. Brisbane, 10 Sep 1918. Killed in action 24 Dec 1942.

[6] F-O M. W. Johns, 407242; 2 Sqn. Clerk; of Reade Park, SA; b. Kadina, SA, 12 Aug 1919. Killed in action 27 Dec 1942.

[7] F-Lt J. W. Robertson, 250658. 8, 14 and 2 Sqns; Instructor 1 OTU and General Reconnaissance School 1943-44; 1 TAF 1945. Builder; of Brighton, Vic; b. Melbourne, 16 Aug 1917.

Throughout January the bombers and the Beaufighters continued their attacks on Fuiloro. Three aircraft of No. 18 (Lieut-Colonel B. J. Fiedeldij) probably shot down two out of five interceptors over Fuiloro on the 20th, and another flight probably shot down a Dave over Dobo that day. No. 18 undertook their first squadron project on 23rd January when nine Mitchells were over Dili, but poor visibility prevented the release of their bombs.

During January the Liberators hit Ambon, and went as far afield as Macassar, Kendari, Sumba Island, Manokwari and Ternate. No. 31 Squadron achieved perhaps its greatest success so far when it sent five Beaufighters to Penfui where they hit what seemed to be an ammunition dump—the explosion hurled fragments to 1,200 feet—and set three aircraft on the ground on fire and probably damaged others.

In the first half of February the Hudsons, Mitchells and Beaufighters struck hard at the flying-boat base at Dobo, aiming at stores, buildings and the jetty. By 15th February half the town seemed to have been gutted. On 18th February six Mitchells of No. 18 fought off interceptors over Dili for 45 minutes, one Mitchell and one Japanese aircraft being shot down. Late in February intercepted Japanese wireless traffic suggested that a very large Japanese air formation, probably of bombers, was moving south from Kendari. They might be going to New Guinea or they might be going to Timor; Timor was considered the more likely. North-Western Area Headquarters worked out the probable Japanese flight plan, assuming that it would follow the usual pattern, and that the enemy's intention was to make a heavy raid on Darwin. It was decided that the earliest time that the Japanese could attack would be in the daytime on the 28th or the following night, and Bladin decided to strike at the enemy early in the morning of the 28th. On the afternoon of the 27th the Beaufighters were sent off to the sandy air strip near Drysdale Mission to await a signal to take off to attack aircraft at Penfui as soon as wireless interception indicated that the enemy force was arriving there. The plan worked perfectly. The Beaufighters were loosed, and eight of them destroyed 12 aircraft on the ground and damaged 10 others. Two or three Zeros intercepted and damaged two Beaufighters, but they got home safely. The surviving Japanese bombers did not attack Darwin.

A powerful reinforcement was now arriving in North-Western Area. As mentioned, Mr Churchill had agreed, on 28th May 1942, to send three Spitfire squadrons to Australia. The squadrons chosen were No. 54 R.A.F. and two Australian E.A.T.S. squadrons, Nos. 452 and 457, both of which had been formed in England in June 1941, and had seen distinguished service. The arrangement was that each squadron would receive 16 aircraft as initial equipment and replacements at the rate of five aircraft per squadron per month.

The equipment of the squadrons had been delayed as an outcome of Rommel's successful offensive in North Africa in May and June 1942. At that time 42 Spitfires—almost enough for the initial equipment of

the three squadrons—were at sea off the West African coast. The Dominions Office, on 24th June—Tobruk had fallen on the 21st—asked Mr Curtin to allow the aircraft to be unloaded at Freetown and flown to Egypt, another consignment being sent to Australia later. After having sought MacArthur's advice Curtin refused to agree on the ground that Australia's needs were no less urgent than those of the Middle East. However, the British Government controlled the ship, and refused to accept Curtin's refusal.

The men of the squadrons had reached Australia in August, and the second consignment of aircraft followed fairly promptly. By October 71 Spitfires had arrived and 33 more were on the water, so that initial equipment plus nearly four months' replacements were in sight. The squadrons were then training at Richmond, where they were grouped as No. 1 Fighter Wing, in which was incorporated a Mobile Fighter Sector Headquarters.

The arrival of the three squadrons in North-Western Area gave a great lift to the spirits of everybody in the Darwin area. The wing was commanded by Group Captain Walters and the wing leader was Wing Commander Caldwell,[8] who had proved himself the most deadly Australian fighter pilot in the Middle East. No. 54 Squadron R.A.F. was led by Squadron Leader Gibbs[9] and Nos. 452 and 457 by Squadron Leaders Thorold-Smith[1] and James[2] respectively. Before the new squadrons had been fully established in the area No. 77 sailed for Milne Bay by way of Townsville. The Spitfires drew their first blood on 6th February when Flight Lieutenant Foster[3] of No. 54 shot down a Dinah 35 miles west-north-west of Cape Van Diemen. The squadrons were now disposed with No. 54 at Darwin, No. 452 at Strauss and No. 457 at Livingstone, eager to engage the Japanese bomber forces, but in February no raiders appeared over the Darwin area.

Throughout March the Hudsons, Mitchells and Beaufighters continued their attacks on Fuiloro, Dobo and other bases, and on ships. The Liberators attacked shipping as far afield as Ambon and Dutch New Guinea. Late in the month Mitchells of No. 18 scored well against enemy fighters. A single Mitchell damaged one of three Zeros over Kaimana Bay on 24th March, and in an epic duel with two Zeros in the same area on the 30th a Mitchell shot down one Zero and probably the other.

The Spitfires had their first big clashes with the enemy in the first half of March. On the 2nd, 16 Japanese aircraft attacked Coomalie,

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[8] Gp Capt C. R. Caldwell, DSO, DFC, 402107. 250 Sqn RAF; comd 112 Sqn RAF 1942, W Ldr 1 Wing 1942-43; comd 1 Wing 1943, 80 Wing 1944-45. Commission agent; of Rose Bay, NSW; b. Sydney, 28 Jul 1911.

[9] Sqn Ldr E. M. Gibbs, DFC, 43200, RAF. 608 Sqn RAF; comd 54 Sqn RAF 1942-44. Regular airman; of Biggin Hill, Kent; b. Whittington, Staffordshire, 14 Jul 1912.

[1] Sqn Ldr R. E. Thorold-Smith, DFC, 402144; comd 452 Sqn 1942-43. Medical student; of Manly, NSW; b. Manly, 30 Jun 1920. Killed in action 15 Mar 1943.

[2] W Cdr K. E. James, 408021. 457 Sqn; comd 457 Sqn 1942-44, 85 Sqn 1944-45, 79 Sqn 1945. Draftsman; of Launceston, Tas; b. Ballan, Vic, 27 Mar 1920.

[3] Sqn Ldr R. W. Foster, DFC, 80815, RAF. 605 and 54 Sqns RAF. Clerk; of London; b. Battersea, London, 14 May 1920.

damaging some aircraft. Spitfires of No. 54, two of them piloted by Group Captain Walters and Wing Commander Caldwell (soon to succeed Walters in command of the wing) intercepted. Caldwell was credited with bringing down one Zero and one Kate and Squadron Leader Gibbs one Zero.

On the 7th No. 457 Squadron had what its diarist described as its "first Australian blooding". At 11 a.m. four aircraft were scrambled to intercept Japanese aircraft reported to be over Bathurst Island. They were ordered to 15,000 feet and found a Dinah heading for home over the sea about 15 miles from Darwin. Flight Lieutenant Maclean[4] and Flight Sergeant McDowell[5] each made two attacks at close range and the enemy plunged into the sea burning fiercely.

The second and last raid in March and the 53rd raid on the Darwin area occurred on the 15th. The Japanese formation consisted of three large sections of bombers in line abreast escorted by Zeros in threes about 2,000 feet above the bombers and a mile in front of them. There seemed to be 20 to 23 bombers and a slightly larger number of fighters. The raiders were intercepted by the whole wing and a general dogfight followed over Darwin harbour. The Spitfires shot down seven aircraft and probably damaged seven others. Flying Officer Goldsmith[6] of No. 452 destroyed a Betty and a Hap. Four Spitfires were lost, but the only casualty was Squadron Leader Thorold-Smith, commander of No. 452, with which he had served with great distinction in its first and brilliant tour of duty in Fighter Command, Great Britain, from July 1941 to March 1942. Later in the month command of the squadron was taken over by Squadron Leader MacDonald[7] who had served with No. 67 Squadron R.A.F. at Singapore, and who, before coming to No. 452, had commanded No. 12 Squadron at Batchelor.

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[4] F-Lt D. H. Maclean, 404652. 457 Sqn; comd 457 Sqn 1945. Planter; of Rabaul, TNG; b. Strathfield, NSW, 18 Dec 1916.

[5] P-O F. R. J. McDowell, 403070; 457 Sqn. Wool classer; of Oatley, NSW; b. Waverley, NSW, 4 Feb 1917. Killed in action 6 Jul 1943.

[6] Sqn Ldr A. P. Goldsmith, DFC, DFM, 402500. 234, 242 and 126 Sqns RAF, 452 Sqn. Public servant; of Artarmon, NSW; b. Waverley, NSW, 25 Apr 1921. Died 25 Mar 1961.

[7] Sqn Ldr R. S. MacDonald, 270812. 67 Sqn RAF and 25 Sqn; comd 12 Sqn 1942-43, 452 Sqn 1943-44. Grazier; of Clermont, Qld; b. Rockhampton, Qld, 7 Apr 1916.

CHAPTER 31

GONA, BUNA, SANANANDA

AS MacArthur turned to the serious task of developing his triple-pronged thrust on the strong Buna-Gona beachheads, he was very much aware of the wavering Allied fortunes at Guadalcanal. He had a degree of commitment in the Solomons campaign, and the strength of his forces, the strategy to be applied in his own area, and the enemy strength with which he must contend would be seriously conditioned by the outcome of that campaign.

As expressed in a message to the War Department in Washington on 17th October, MacArthur needed "more men, more ships and more planes". He was still pressing for the diversion of more resources from the United States to meet the situation in the Pacific, but the fundamental policy adopted in Washington—defeat Germany first—was not to be changed. It was true that the Japanese had been forced to accept defeat at Milne Bay and that their troops were then falling back on the Kokoda Track—two reverses that had been inflicted by entirely Australian land forces—but the Japanese still were, as MacArthur had indicated, in a very strong position, notably at sea.

So far as the air war was concerned, the prospect facing the Allied forces was certainly more hopeful. The enemy's air strength had, in fact, been depleted, particularly in well-trained and experienced aircrews, and in the air over the Solomons and New Guinea they had now lost the degree of superiority to which the earlier campaigns had accustomed them. Moreover the Allied air strength, though still far from sufficient for the task, was building up gradually, even though MacArthur had to accept the diversion to the Solomons of reinforcements in both aircraft and crews assigned and in transit to his own area. But, though Intelligence reports and air photographs indicated an Allied numerical superiority in aircraft in the whole theatre, it was still true, as Kenney pointed out to Arnold in a letter written on 24th October, that for the Japanese, the combat zone was only two days' flight from their aircraft factories. To this observation, he added the comment, "and he may swarm all over me".[1] A few weeks earlier, while assuring Arnold that the Kittyhawk and, to a lesser extent, the Airacobra were very useful aircraft, Kenney had been pleading hard for the newest type of American fighter, the Lockheed P-38 or Lightning, a fast, high-altitude, long-range, twin-engined aircraft with a conspicuous twin fuselage and tail.[2] Its manufacturers claimed for it a speed of between 390 and 414

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[1] Kenney to Arnold, 28th August, 24th October, 1942. Intelligence summaries for August showed the Fifth Air Force alone as having 258 fighters and 192 bombers (82 medium, 74 heavy and 36 light) opposing a Japanese aircraft strength estimated at 117 fighters, 170 bombers and 140 miscellaneous combat aircraft in the entire South and South-West Pacific (including the NEI).

[2] Kittyhawks and Airacobras accounted for more than one-half of all USAAF fighters until July 1943. Though the Lightning was designed in 1937, first deliveries (only 13 aircraft) were not made until June 1941. By the end of August 1945 total acceptances of this aircraft from the factory had reached 9,536.

miles an hour and it offered just what Kenney most wanted in a fighter—a performance that would counter that of the Zero flying as top cover for enemy bomber formations, which could then be dealt with effectively by the Kittyhawks and Airacobras. Before this hope could be granted the Allied air command was to endure considerable exasperation: though 60 Lightnings had reached the theatre by October, troubles were experienced with fuel tanks, superchargers, water coolers and armament, all of which demanded modifications or repair and 1942 had almost ended before they went into effective combat in New Guinea skies.

The whole problem of aircraft supply, assembly and maintenance at this time called for great drive and determination. Salvage was assiduously carried out, the skin from crashed aircraft being used for patching the large holes caused by the enemy's explosive cannon and anti-aircraft fire, while, to cover the smaller bullet holes, even flattened-out tin cans were being used. Fighters were grounded for lack of Allison engine bearings which, ordered urgently in August, did not arrive until October, and lack of proper tools for Pratt and Whitney engines held up repairs to Marauders and Dakota transports. To offset these difficulties Australian aircraft factories, airline workshops and the local offshoots of two American companies, General Motors and the Ford Motor Company, were now giving much aid. Necessarily limited but growing in capacity, this aid was accepted by the U.S.A.A.F. with some misgivings.[3]

Maintenance and air service engineering was one of Kenney's specialties. Apart from having a natural flair for achieving practical results by unconventional methods, he had served for two years before the war as American Army representative with the Curtiss aero-engineering organisation, and as chief of the production engineering section of the Air Corps Materiel Division. It was no surprise to those who knew him that he reorganised the Army Air Services Command (which, in mid-October, became Air Service Command, Fifth Air Force) with plans, quickly adopted, for the movement northward of all service units—to Port Moresby, Milne Bay, Charters Towers, Charleville, Mareeba, Brisbane and, most importantly, to Townsville where No. 4 Air Depot Group, commanded (from September) by Lieut-Colonel Victor E. Bertrandias, a former vice-president of the Douglas Aircraft Corporation Company, was built up into one of the largest supply and maintenance depots in the Pacific theatres.[4] At Port Moresby, where advance headquarters of the U.S. Army Air Services had been established in September, this organisation had accepted responsibility at Jackson airfield for the housing and feeding of the many transient combat crews, the operation of an air depot for both Port Moresby and Milne

[3] "There was some feeling among American airmen that Australians lacked an understanding of the American motor and that engines reconditioned by Australians were unsatisfactory."—Craven and Cate, Vol IV, p. 102, f-note 40. Whatever justification there may have been for this American attitude at the outset the facts were that when the war ended General Motors-Holden's Ltd. and the Ford Manufacturing Co. of Australia Ltd. had jointly overhauled 11,700 engines and 4,155 airframes of which 5,000 and 1,500 respectively were for the USAAF.—Mellor, *The Role of Science and Industry*, p. 396.

[4] In October, Bertrandias succeeded to the post of Townsville area representative and in January 1943 to that of commanding officer of Fifth Air Force Air Service Command.

Bay, the salvaging of damaged aircraft, and the highly important though routine maintenance of fighters, light bombers, transports and miscellaneous transient aircraft. The burden of this work was borne by No. 8 Service Group which with about 50 officers and 1,000 other ranks had been hard pressed since its arrival in April and had achieved splendid results under considerable difficulties.[5]

More dramatic and directly concerned with air combat was the work being done to improve and develop armament—both gunnery and bombs. Kenney encouraged his specialist officers in their original endeavours and the results were often effective. A notable example was the work done on the American Boston which, short of range, was also comparatively weak in fire power. Originally armed with only four .30 calibre machine-guns, this was increased by the addition of four .50 calibre guns mounted in the nose, and the range was extended appreciably by the installation of two 450-gallon fuel tanks in the bomb bay. For these reasons the entry of the Boston into combat operations had been delayed until September. Even then there was some restriction on its use through lack of bombs which could be dropped safely from low altitude. Kenney himself solved this problem by initiating the use of parachutes attached to 23-lb fragmentation bombs fitted with instantaneous fuses. These were the bombs he had "discovered" in store in the United States on the eve of leaving to take up his command in the South-West Pacific. When they had been used by No. 89 Squadron in an attack on the Buna airstrip on 12th September, some Japanese, apparently thinking a paratroop landing was imminent, had rushed out and begun to shoot with rifles. They quickly realised their error as the bombs exploded the instant their noses touched the ground. On that occasion the Boston crews claimed to have destroyed 17 aircraft on the ground. The Bostons' attack was followed by five Mitchells and then seven Flying Fortresses.

Kenney ordered a further 125,000 "parafrag" bombs from the United States and meanwhile American and Australian ordnance experts were put to work converting the standard fragmentation bombs to meet the immediate need. Later in September further experiments were made with 300-lb and 500-lb bombs which had been wrapped with heavy steel wire and fitted with instantaneous fuses on the end of a 6-inch pipe extension from the nose. On explosion the wire broke into pieces, of from 6-inches to 2-feet which, to use Kenney's words, "cut limbs off trees a hundred feet away which were two inches thick . . . and wailed and screamed like a whole tribe of disconsolate banshees".[6]

Experiments were made also with a fuse used normally for photo-flash bombs that were intended for night photography. This fuse was attached to the fragmentation bombs and timed to cause the explosion about 50

[5] Some relief was provided in December 1942 when No. 27 Air Depot arrived from Brisbane, but with men unseasoned to the tropical climate, inadequate accommodation and facilities, it was some time before this unit became effective. For example one depot repair squadron had but one carpenter's kit with which to attempt its task of clearing an area and erecting buildings.—Craven and Cate, Vol IV, p. 105.

[6] Kenney, pp. 106-7.

feet above the ground—a particularly effective device in attacks on grounded aircraft.

For bombing attacks on unarmed ships Kenney, believing that claims by bomber crews concerning the damaging effect of near misses, with the one-tenth second delay fuse setting then in use, were exaggerated, ordered the use of an instantaneous fuse. Walker and his naval liaison officer were sceptical but Kenney insisted. Some time later Kenney called for the bombing statistics which, he stated later, "showed conclusively that the instantaneous fuse setting was doing the job. . . . Convoys were slowing down after being attacked, more ships were being sunk, and many more were reported damaged and on fire."[7]

Not the least of Kenney's problems was a deficiency in aircrew training —notably in navigation, instrument flying and bomb aiming. This stemmed mainly from a shortage of instructors and the excessive demand for all types of aircrew. Of the three stages of American aircrew training—primary, basic and advanced—the basic stage was divided into a transition phase which concerned aircraft familiarisation and fundamental operations, and a diversified phase which included manoeuvres, aerobatics, and navigation, and formation, instrument and night flying. Insufficient time was allowed for both phases.

> Experience in combat underlined the necessity of flying at night and under all weather conditions (an American historian has written) and such missions required operation of aircraft by instruments. The nature and extent of the instrument indoctrination given to pilots at basic schools were insufficient until late in 1943, partly because of the traditional peace-time attitude of training officers who subordinated instrument work to conventional visual manoeuvres. Another reason for this deficiency was the acute shortage of instructional time and equipment; moreover, the system of instrument flying used by the A.A.F. before June 1943 was not the most efficient. . . . Gyroscopic instruments were practically ignored [before that date].[8]

On 16th and 17th November Kenney sent Liberators of No. 90 Group on their first missions in the area but the crews revealed such defects in training that the whole group was then taken out of combat for instruction in navigation and night flying and for practice bombing and gunnery.

Defects in training in the American Service in the early months of the war led to the absorption of as many fully trained R.A.A.F. aircrew as could be obtained for service principally in American Flying Fortress and Mitchell bomber units and in transport squadrons. In some senses the R.A.A.F. had comparable training difficulties, but in instrument flying and navigation there had been strong insistence that the standards should be high. Thus, apart from the very substantial secondment of R.A.A.F. air-

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[7] Kenney, p. 142.

[8] Craven and Cate, *Men and Planes* (1955), pp. 570-1, Vol VI in the official series *The Army Air Forces in World War II*. This source also notes, "One of the principal criticisms of early training was the lack of attention given to analysis of the causes of bombing errors. Bombardier graduates appeared in general to be deficient in knowledge of their equipment and inaccurate in making fundamental computations. Shortages of qualified instructors and proper equipment, and lack of training time were considered to be the chief causes for the deficiency" (p. 580). ". . . Unfortunately if inevitably, the demands of the combat theatres continued to conflict with the needs of a sound training program. . . . Shortages of aircraft, equipment, and facilities handicapped training at almost every step, from the beginning of the war until nearly the end" (p. 612).

crew, notably pilots and navigators, there was a reliance on Australian-manned Catalinas and Hudsons to lead American bomber formations to the target.

About this time Allied commanders were particularly concerned about the enemy's successful use of darkness and low overcast weather as cover for the landing of further troops in the Buna area. General Blamey pressed General Herring to speed his plans for the seizure of Buna because there were indications that further enemy forces were gathering at Rabaul for the reinforcement of the Buna-Gona garrison. By the middle of November the 128th U.S. Regiment had staged by sea through Pongani to the Oro Bay area and the II Battalion of the 126th Regiment had now moved from Jaure to Natunga, about three days' march to the west of Pongani. Situated in wild country on the slopes of Hydrographer's Range, Natunga presented many difficulties for aircrews engaged in supply dropping. These were grimly illustrated when the regiment's commander, Colonel Lawrence A. Quinn, and a crew of seven, were killed when the aircraft in which they were making a survey of the supply-dropping area crashed after a parachute had fouled the plane's tail. There was further loss when, as the remainder of the regiment was being flown over the mountains, one aircraft crashed and all on board were killed, except six men who eventually walked back to Abau.[9] Confusion in this forward movement resulted in most of the I Battalion being landed at Abels' airfield, while the III Battalion, with the regimental headquarters, landed at Pongani. The lack of coordination responsible for this error was a subject for criticism within the Allied command.[1]

The Japanese in Papua, now driven back to the coast, were consolidated within three strongly held and contiguous beach-heads. The most easterly of these extended from just south of Cape Endaiadere north-westward to Buna. The central position encompassed Sanananda Point with one lateral extremity reaching to a point a short distance to the south-east of Giruwa and the other to the north-west, meeting the coast at Wye Point. The western beach-head centred on Gona Mission in an arc beginning approximately three miles and a half west of Wye Point.

The entire front was little more than six miles long and three-quarters of a mile across at its deepest point. Its approaches greatly favoured the defenders, providing a variation between swamps (often impenetrable), steamy jungle, open kunai patches and coconut plantations. The terrain was so low-lying that it was largely water-logged. Bomb and shell craters almost immediately became waterholes, and troops seeking protection by

[9] In the circumstances and despite these serious losses the accident rate for the air supply service was not heavy. For the 3 months October to December 1942, of the sorties flown by four American troop-carrier squadrons (Nos. 6, 21, 22 and 33) only 11 aircraft crashed and of these five were rebuilt.

[1] "Blamey . . . was not particularly impressed by the 32nd Division staff work as shown by the way they continued to mess up the planning of the daily haul of the troops and supplies across the . . . Owen Stanley range. I had to admit the Australian planning was much better."—Kenney, p. 137.

digging in mostly found themselves waist-deep in muddy water. Even the original Buna aerodrome—known to the Allied forces as the "Old Strip" —which the Japanese had enlarged to an area about 1,300 yards by 90 yards was only five feet above sea level. Across the Simemi Creek to the south-east the enemy had made a dummy aerodrome which became known as the "New Strip". Allied bombing had been so concentrated and frequent that the Japanese had been unable to use the Old Strip since the end of September. They had, therefore, to rely on their always hazardous seaborne communications, supplemented by such parachute dropping as could be achieved.

The Japanese had developed well planned and extremely strong defensive positions—a network of cunningly contrived and mutually supporting bunkers arranged in depth and most stoutly built with coconut palm logs. The largest of these bunkers served as air raid shelters and protection from heavy artillery fire. When such attacks ended, the enemy troops emerged to pass along shallow communication trenches to smaller, well-positioned bunkers and firing posts.

For the coordinated Australian-American advance on these beach-heads the approaches had been divided by accepting the Girua River as the boundary, with the Australians responsible for the investment of Gona and Sananda and the Americans for the Buna sector.[2] The American advanced base had been established at Porlock Harbour from which the supply service to the front line, established to the north of Cape Sudest, was to be maintained by seven luggers and an enemy barge salvaged from Milne Bay and repaired. This barge and three of the luggers were moving up the coast from Oro Bay on 16th November, with troops, rations, ammunition and (in the barge) two 25-pounder guns of the 2/5th Field Regiment, sent from Milne Bay to give artillery support to the American troops. Travelling with the little company was General Harding of the 32nd Division. As the vessels rounded Cape Sudest they were attacked by 14 Zeros and all four were set on fire and left sinking. Twenty-four of the troops were killed and a larger number wounded. The survivors, including General Harding, escaped by swimming ashore. The loss of the guns, ammunition and stores, and the proof of how vulnerable this coastwise line of communication really was, quite seriously upset the American supply system; it was three weeks before the service was resumed. Thereafter it was resolutely maintained in spite of air and sea attacks for it was an essential line of communication on which the eastern flank of the Allied ground forces was almost wholly dependent.[3] For the forward movement from Port Moresby of most of the Allied ground forces still to be brought in to the battle line, and for the supply of the troops engaging the enemy in the central and western sectors, reliance was now to be placed almost solely on the Allied Air Forces' transport system. About a

[2] A variation soon occurred; the 126th Regt was moved across the Girua River to Soputa in keeping with a New Guinea Force decision to attack west of the river with the maximum force possible.

[3] The threat was not confined to air attack. On 23rd December two Japanese PT boats sank an Allied ship off Hariko and machine-gunned the supply base.



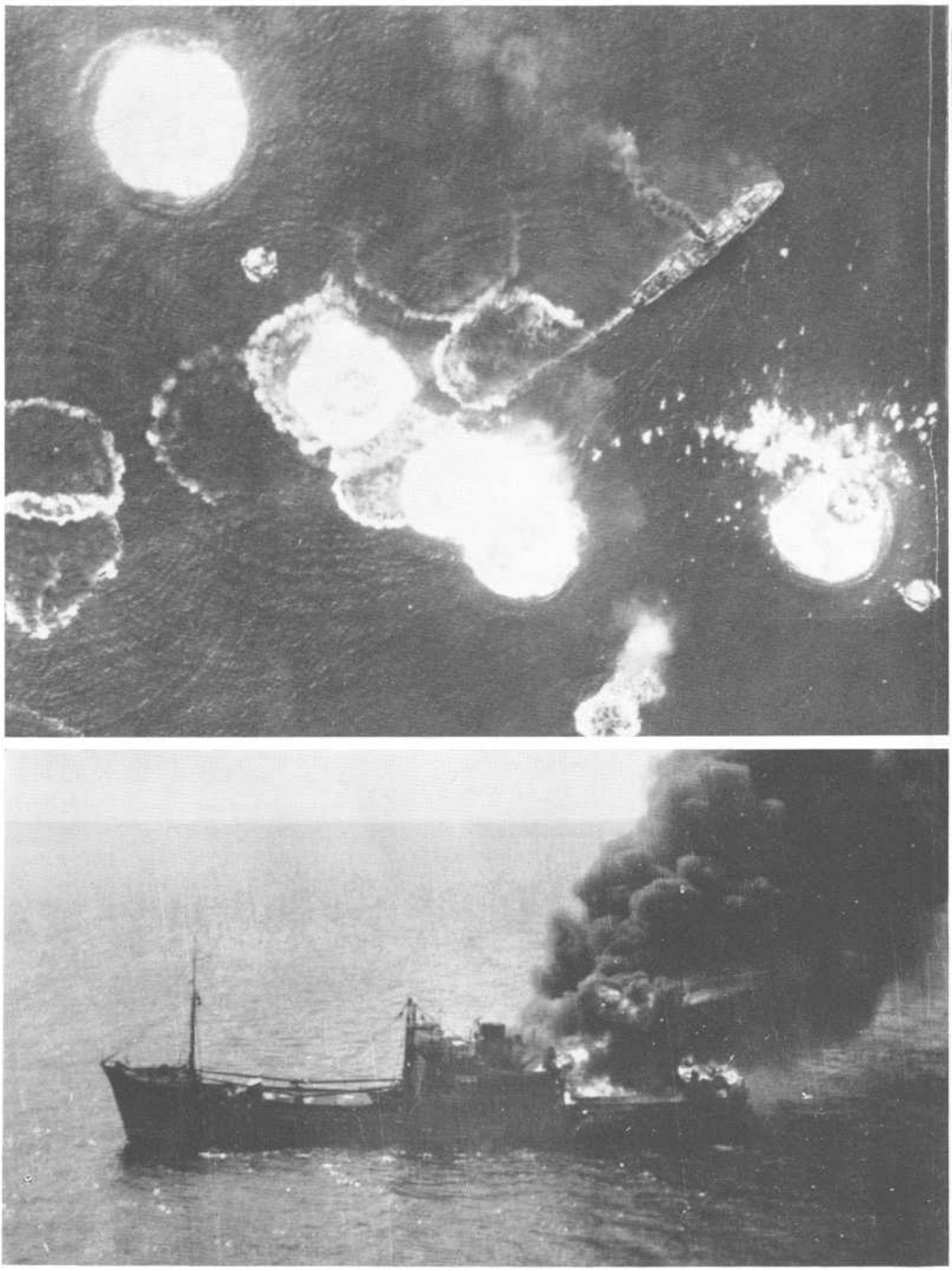
(*Australian War Memorial*)

The arrival by air of 25-pounder guns of the 2/1st Field Regiment at 9.15 a.m. on 30th January 1943 was a factor in turning the tide of battle in favour of the Australian ground forces when the Japanese were closing in on Wau.



(*R.A.A.F.*)

Troops based on Wau had to be supplied by air. The above photograph shows four of the ubiquitous Dakotas. (This No. 22 Squadron photograph records the date as "31st" February. Perhaps the 21st was meant: the starboard wing of the nearest aircraft is damaged, and one of the sporadic Japanese raids took place on the 21st.)



Attacks by Allied Air Forces on Japanese ships during the Battle of the Bismarck Sea on 3rd March 1943, illustrating two aspects of a closely coordinated three-stage air bombardment which achieved the destruction of 12 vessels of a 16-ship convoy bound for Lae. The general order of the attack was, firstly, medium-level attacks to disperse the convoy; secondly, strafing attacks from all quarters to disorganise the anti-aircraft defences; and finally, mast-head bombing attacks to make the actual kill. In the upper photograph a destroyer steams astern while under American bombing, and in the lower, Beaufighters of No. 30 Squadron strafe a transport which has already been bombed.

week after the enemy's air attack on the barges off Cape Sudest, air strips had been cut on open kunai grassland only about ten miles from the enemy's positions. Here, with American engineers at work in the vicinity of Dobodura and the Australian 2/6th Field Company at Popondetta, air bases that were to have the utmost significance in the impending battles were developed.

Meanwhile the 25th Australian Brigade had been moving towards Gona while the 16th Brigade was advancing on Sanananda. Action began for the Americans on 19th November when the enemy, from cleverly concealed emplacements, swept their forward troops with bursts of fierce fire as they endeavoured to advance towards Cape Endaiadere on the one hand and a bridge across the Simemi between the new and old airstrips on the other. These inexperienced troops who had been led to expect an easy victory were "dazed and taken aback".[4]

MacArthur, temporarily at Port Moresby, uneasily demanded an immediate assault along the whole Buna-Gona front on 21st November. He instructed Blamey that ". . . all columns shall be driven through to objectives, regardless of losses". The advance of Harding's troops in the Cape Endaiadere sector was to be preceded by a heavy bombing attack on the enemy's forward positions, timed for 8 a.m.

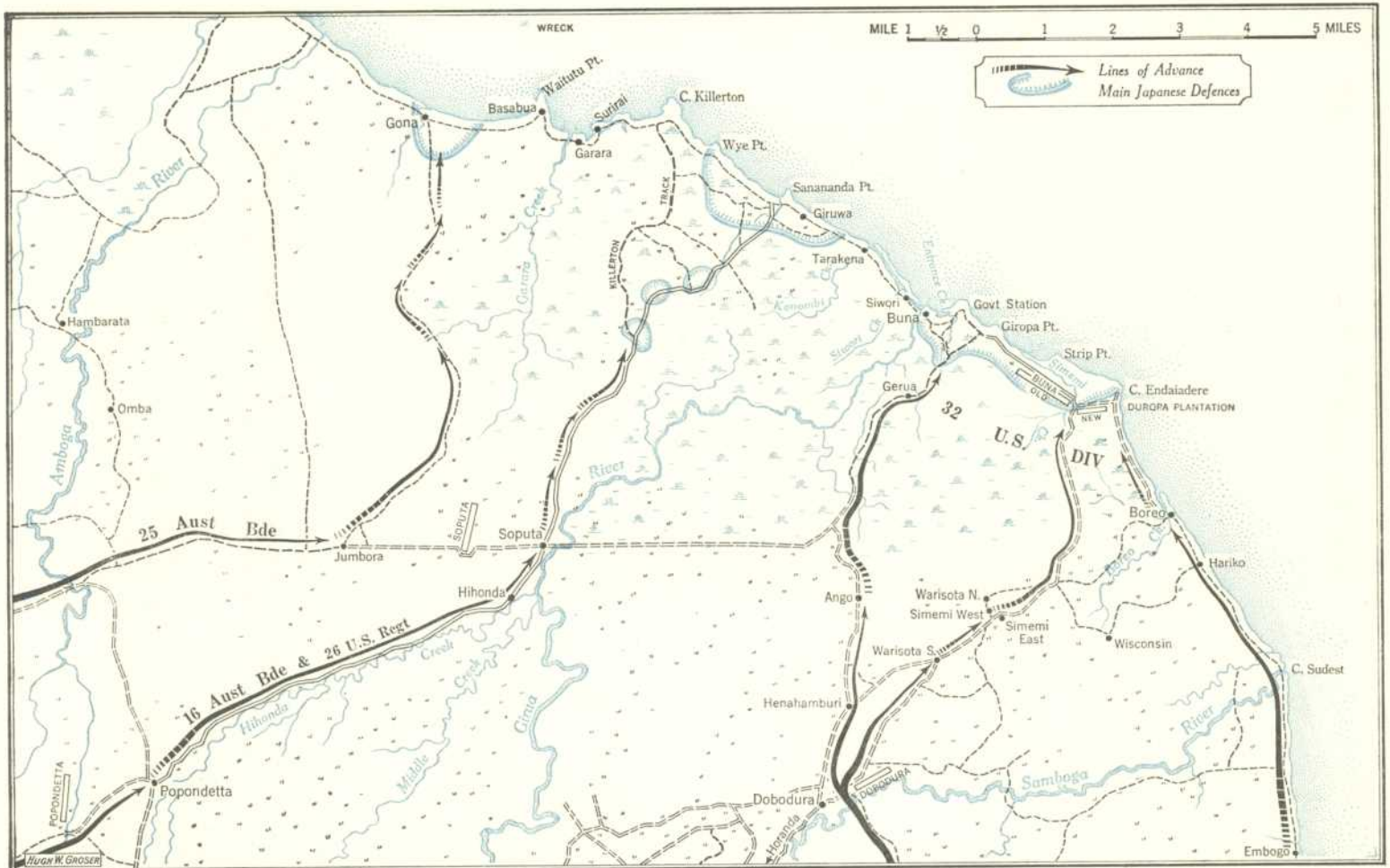
Individual American battalions had been directed by divisional headquarters to submit requests for air support based on "the availability of not more than two flights of three planes each daily" and of a time over the target area of not more than 45 minutes. Targets were to be specified as exactly as possible, along with the positions of Allied troops; target designation to be by coordinates supplemented by the use of panels, smoke signals or, when practicable, ground to air communication.

The air attack on the morning of the 21st was not very successful. American-manned Bostons flew in at an altitude of only 60 feet to release parachute bombs and Mitchells followed at 6,000 feet. Several enemy machine-gun posts were silenced but one of the Mitchells dropped a bomb inside the bomb line and killed four American soldiers and wounded two, an unfortunate incident that was repeated later in the day causing 18 more casualties (6 killed and 12 wounded). Failure of direct air to ground communication and reliance on area bombing when targets like enemy bunkers called for pin-pointing were blamed for this lack of success.[5] No progress was made with the ground attack by the American troops who were confused and disconcerted.

Meanwhile the more experienced and thus more stable Australian troops of the 25th Brigade were pressing slowly forward against the Gona defences and the men of the 16th Brigade, who had lost almost one-third of their

[4] S. Milner, *Victory in Papua* (1957), p. 175, a volume in the official series *United States Army in World War II.*

[5] For the AAF it was claimed that target requests were directed to the wrong headquarters and that they often contained insufficient information. On the other hand Buna Force signalled New Guinea Force on 10th December: "Will you please clarify *where* our radio request for air support should be directed. . . . We will send messages to you wherever you direct—if you will please tell us where!! Yesterday at 1130L we started our yell for today's support directly to your headquarters but alas! no avail! Thanks."—Craven and Cate, Vol IV, p. 125.



The Allied advance on Buna, Sanananda and Gona

strength in battle alone since setting out across the Owen Stanley Mountains, were being bitterly and effectively resisted on the Sanananda front.

Despite the strength of the Allied air support the need for accurate artillery fire to reduce the enemy's heavily built bunkers and firing positions was very apparent. The Americans had support from two 3.7-inch howitzers of the 1st Australian Mountain Battery which had been placed in position near Hariko and, by 22nd November, from the two remaining 25-pounder guns of the troop from the 2/5th Field Regiment which had lost half its gun-power when the barge containing them was sunk in the enemy air attack on the 16th. With only this quite minor artillery support in action, there was understandable anxiety to strengthen it at the earliest opportunity. This opportunity was now at hand; the 2/1st Field Regiment, well-tried Australian gunners who had fought in the African desert and Greece, had arrived at Port Moresby. Two troops from this regiment were being prepared for forward movement and the greatest problem was how best to get them into action quickly. The answer lay in the air strip development that had begun at Popondetta, where, in only two days, with the aid of all the native carriers who could be spared, the Australians had prepared a runway 1,600 yards long, and at Dobodura where, by the same date, the American engineers had made comparable progress. The decision to fly the guns of the two troops to the battle area was a bold one. The 25-pounders certainly had not been designed for air transport. Once dismantled the separate parts were still very heavy, awkward to load and unload, and threatened to impose quite unintended and therefore dangerous strains on the Dakotas' airframes. But the risks were readily accepted. On 21st November the first aircraft flew in to Popondetta and by the 23rd half a troop—men, two guns, ammunition and stores—had been transported by air and then moved up the track to Soputa where they went into action on the same day. The second half of this detachment—named Blackforce—was flown in almost immediately. The other detached troop, to be known as Bullforce, was moved to Dobodura in a comparable airlift. The movement of these two artillery troops by air almost into the battle line, the first of its kind in the South-West Pacific Area, was a notable achievement. It imposed a series of calculated risks and its success was a tribute to those who undertook it and to the remarkable sturdiness of the Dakota.

Maintenance of the ammunition supply for these guns was a further heavy burden for the transport squadron crews who were performing tasks without which the Allied ground forces would have been almost helpless. One more piece of artillery, a 105-mm howitzer of the 129th U.S. Field Artillery Battalion, was landed at Dobodura on the 26th together with its crew, a tractor and 100 rounds of ammunition.[6]

Experience and the rapid development of the advanced bases at Popondetta and Dobodura had led to improved coordination of the whole air transport system. Average flying time between Port Moresby and, say,

[6] Four of these howitzers with all equipment had been flown from Brisbane to Port Moresby in four Flying Fortresses.

Dobodura was 35 minutes and at times as many as 30 aircraft sortied in one day, some of them making as many as four or, weather permitting, even five flights between dawn and darkness. The brunt of this transport burden was being borne by No. 374 Troop Carrier Group, to whose crews quite a large number of Australians had been seconded, chiefly as pilots. But the full task was greater than the group's capacity and there was urgent need for more aircraft. As an immediate answer the Hudsons of No. 6 Squadron were pressed into service. This unit's contribution began on 21st November when nine aircraft dropped supplies to Australian troops in the Buna area. These sorties were continued until, by the end of the month, they had dropped 40,000 pounds of supplies.[7]

In the beginning there was difficulty in handling the freight unloaded from the transports at Dobodura where the aircrews did their best with what labour happened to be available. But by 10th December an American quartermaster detachment had taken control and conditions were greatly improved. There was always a risk that enemy fighters might break through to attack the unarmed transports and Allied fighters had a special responsibility for their protection. As the distance between Port Moresby and the Buna front bases was comparatively short (just 100 miles) area cover was preferred to an attempt to maintain continuous escort. Full squadrons of fighters operated over the area in relays. The transports themselves, after passing through the "Gap", were flown low just above the jungle growth. On landing, the crews kept their motors running while the aircraft were unloaded so that there was a minimum of delay on the ground where they were particularly vulnerable to air attack.

But still the demand was for more transport aircraft and so a decision was made to send a R.A.A.F. Special Transport Flight from Australia. The composition of this flight was an expression both of the urgency of the situation in New Guinea and of the poverty of MacArthur's command in transport aircraft. Its strength was made up from 15 Hudsons from No. 1 Operational Training Unit at Bairnsdale, Victoria; a single Douglas DC-2 from the Paratroop Training Unit; and eleven aircraft from civil sources —two De Havilland-86s, two Lockheed 10s, two Stinsons, one Lockheed 14, one Douglas DC-2 and three Douglas DC-3s.[8] Commanded by Squadron Leader Hall,[9] it had a R.A.A.F. strength of 45 officers, 45 N.C.Os and 30 airmen, and a civil complement of 48 aircrew under the charge of Captain Burgess[1] of the Department of Civil Aviation who, before the war, had been the department's district superintendent in New Guinea. Five days after formation the unit was reinforced by ten Dakota crews temporarily transferred from No. 36 Squadron.

[7] Before it moved, on 24th December, to Milne Bay for more normal operations, No. 6 Squadron had added another 12,300 pounds to its supply dropping total.

[8] All crews then engaged in operational training at Bairnsdale were sent on leave subject to recall at short notice and instructors not included in the special unit were temporarily transferred to train Beaufort crews.

[9] W Cdr O. B. Hall, DFC, AFC, 260239. 6 Sqn; comd Special Transport Flight 1942, 34 Sqn 1943, 8 Sqn 1945. Commercial pilot; of Bellevue Hill, NSW; b. 18 Jun 1908.

[1] Capt V. W. Burgess, MBE, AFC. RFC and RAF 1917-22; RAAF 1923-27. NGVR 1941-42. Officer of Dept of Civil Aviation; of Sydney; b. Kensington, NSW, 3 Dec 1896.

The R.A.A.F. Special Transport Flight begar operations from Ward's aerodrome on 14th December with supply dropping at Soputa. Next day in the same area, the unit recorded its first casualties. The crew of one Hudson, who were making their fourth sortie for the day over the dropping area, were shot down by enemy anti-aircraft fire. The aircraft crashed and the captain, Squadron Leader Pedrina, his observer, Flying Officer Kerr,[2] and wireless operator, Sergeant Itzerott,[3] were all killed, only the rear gunner, Flight Sergeant Callagahan,[4] surviving. Callagahan, who had a broken pelvis and forearm, was rescued by some troops. He related later that their aircraft, in company with several other Hudsons, had made three sorties in the morning. By afternoon cloud had closed the Gap but a consignment of ammunition needed urgently by an A.I.F. unit was waiting to be delivered, and so three Hudsons piloted by Squadron Leader Gibbes, Flight Lieutenant Landrey[5] and Pedrina took off to fulfil this mission. The Hudsons succeeded in getting through the Gap at 6,500 feet beneath the cloud. After making two circuits and dropping the stores from about 200 feet, Pedrina's aircraft was on its final run when, in Callagahan's words, "the machine shook violently and went into a steep climb" before crashing. The loss so early in these operations of a pilot like Pedrina, who was held in particular regard in this unit which had many distinguished pilots, together with his observer and wireless operator, was severe.

On 26th December enemy fighters made a desperate effort to interrupt the Allied air supply train. In their first raid on Dobodura, enemy aircraft bombed and strafed the new aerodrome. Five Zeros attacked Landrey's Hudson immediately after taking off from Dobodura. Low-level evasive tactics were successful and Landrey flew the aircraft back to Port Moresby safely except that the air-gunner, Sergeant Ross,[6] was slightly wounded and enemy bullets burst the Hudson's tyres and caused minor damage to the airframe. Ross scored hits on one Zero with unobserved results. In similar circumstances another Hudson piloted by Hall was set upon by about seven Zeros. While Hall too used low-level evasion successfully, his gunner shot down one enemy fighter, probably destroyed another and damaged a third. Hall's wireless operator, Sergeant Crisp,[7] extinguished a fire in the aircraft caused by an incendiary bullet. When the aircraft returned to base it was in a badly damaged condition but the crew were unharmed. A third Hudson, piloted by Flight Lieutenant Marshall, took off from Dobodura, ran the gauntlet of enemy fighters and landed again

[2] F-O D. B. Kerr, 416431. 32 Sqn and 1 OTU (RAAF Special Transport Flight). Student; of Medindie, SA; b. Adelaide, 27 Jun 1919. Killed in action 15 Dec 1942.

[3] Sgt A. R. Itzerott, 401750. 6, 32 Sqns, 1 OTU (RAAF Special Transport Flight). Student; of Murrumbeena, Vic; b. Foster, Vic, 16 Jan 1919. Killed in action 15 Dec 1942.

[4] W-O L. Callagahan, 300400. 11 Sqn and 1 OTU (RAAF Special Transport Flight). Regular airman; of Wau, TNG; b. Wanganui, NZ, 19 Feb 1915.

[5] W Cdr F. Landrey, AFC, AFM, 43176, RAF. 1 OTU (RAAF Special Transport Flight); instructor at RAF and RAAF flying schools 1942-45. Regular airman; of Folkestone, Kent, Eng; b. Poole, Dorset, Eng, 17 Sep 1909.

[6] F-O C. G. Ross, 409949. 1 OTU (RAAF Special Transport Flight) and 2 Sqn. Printer; of Nhill, Vic; b. Penshurst, Vic, 5 Sep 1910.

[7] F-Sgt R. W. Crisp, 9151. 1 OTU (RAAF Special Transport Flight) and Trans Pacific Air Ferry Service. Radio mechanic; of Auburn, NSW; b. Berala, NSW, 28 Jul 1921.

unharmed. The gunner, Sergeant Moriarty,[8] remained at his gun even after the aircraft had landed and continued to fire on the enemy fighters. But the most dramatic event of the day occurred when another Hudson with Squadron Leader Hemsworth[9] in command was attacked by several Zeros just after take-off, also from Dobodura. Hemsworth could have refrained from taking off, or, having taken off, could have gained sufficient height for the whole crew to bale out. Because he had a number of wounded Australian soldiers as passengers he chose to get his Hudson airborne and fly low to evade his attackers. This he did, while his gunner, Flight Sergeant Stephens,[1] kept firing at the Zeros. The Hudson turned out over the coast near Hariko in the hope of gaining protection from the guns of a friendly corvette, but the gunners of an American anti-aircraft battery, recently put ashore, mistook the Hudson, which was flying at only 400 feet, for an enemy aircraft and fired on it. An incendiary bullet hit the oil reservoir of the aircraft's automatic pilot and set it on fire. Hemsworth promptly ditched the Hudson in the sea and so extinguished the fire, but two of the wounded soldiers were drowned. The remaining four wounded soldiers, Hemsworth himself, his observer, Pilot Officer Rodd,[2] his wireless operator, Flight Sergeant Bamber,[3] and Stephens, were all brought ashore in small boats. In the encounter Stephens had received five severe wounds from which he later died. Hemsworth had been severely burned on the face and arms and Bamber had also been burned and lacerated when the aircraft hit the sea.

About this time one of the flight's Hudson crews was given the distinction of flying General Blamey from Port Moresby to Dobodura. There were very anxious moments when, as the aircraft was about to take off with their "V.I.P." (very important person) on the return flight, information was received that six enemy fighters were approaching. The risk was calculated and the pilot, applying full power, took off and was clear of the area before the enemy aircraft arrived over the aerodrome.

The Special Transport Flight continued its operations until, on 11th January, the tension having eased, it was able to return to the mainland, the Hudson crews now better qualified than ever to continue their important if less hazardous task of operational training. From 14th December to 11th January the Hudsons alone made 645 sorties over the Owen Stanley Mountains, logged 1,020 flying hours, and carried 1,107 troops and a large quantity of supplies, the total weight being almost 780 tons.

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[8] F-Lt F. Moriarty, 403696. 6, 7 Sqns, 1 OTU (RAAF Special Transport Flight) and 2 Sqn. Shearing machine expert; of Cowra, NSW; b. Cowra, 23 Aug 1910.

[9] W Cdr N. G. Hemsworth, DFC, 260417. 2 Sqn, 1 OTU (RAAF Special Transport Flight), 34 Sqn; comd 37 Sqn 1943-44, 12 Sqn 1945. Commercial pilot; of Manly, NSW; b. Balmain, NSW, 31 Aug 1917.

[1] F-Sgt H. R. Stephens, 404304. 8 Sqn and 1 OTU (RAAF Special Transport Flight). Postal mechanic; of Moorooka, Qld; b. Brisbane, 6 Aug 1918. Died of wounds 27 Dec 1942.

[2] F-Lt A. H. Rodd, 401835. 12, 13, 1, 2 Sqns and 1 OTU (RAAF Special Transport Flight); Instructor 1 OTU 1942-43, General Reconnaissance School Bairnsdale 1945. Income tax assessor; of Gardenvale, Vic; b. Yarraville, Vic, 28 Jun 1920.

[3] F-O R. R. Bamber, 403250. 8, 6 Sqns, 1 OTU (RAAF Special Transport Flight) and 2 Sqn. Customs officer; of Sydney; b. Sydney, 15 Sep 1920.

The civil component of the flight also performed most valuable service. The DH-86 aircraft, unsuitable for operations over the Buna area, were employed between Port Moresby and points such as Bena Bena, while the Lockheed 10s operated between Port Moresby and Townsville as did the civil Douglas aircraft that had been pressed into service and whose principal task was the evacuation of wounded.

No. 33 Squadron, operating from Ward's aerodrome, was also engaged in transport operations to the limit of the capacity of its light aircraft, principally Ansons, Dragons and Moths. In December, its first month of operations, the unit added 60,000 pounds of freight to the total of supplies delivered to men manning isolated Allied posts. It also ferried officers and men to and from such posts as circumstances dictated and aircraft capacity permitted. No. 36 Squadron, with its larger (Dakota) aircraft, also accepted a very heavy burden of work in this period by maintaining a regular transport service between Townsville and Port Moresby.

Once the Allied artillery was in action the task for which No. 4 Squadron had been schooled became intense reality. Ten months of war had been waged since Wirraways had been so briefly and so disastrously in combat over Rabaul. They had since had a limited operational role in North-Western Area, but their use in direct contact with the enemy in the Buna area caused some understandable misgivings. Despite these, the decision to employ the Wirraway thus was fully justified; its low speed and the fact that it carried an observer behind the pilot made it suitable for army cooperation. With its headquarters at Berry aerodrome, near Port Moresby, the unit, on 26th November, sent two detached flights to the other side of the Owen Stanleys. One of these was based at Dobodura for cooperation with the guns of Bullforce, the two guns of the 2/5th Field Regiment and the American 105-mm howitzer, and the other at Popondetta for service with Blackforce. Operating under direct control from New Guinea Force Headquarters, though a part of No. 9 Operational Group for administrative purposes, the squadron was now commanded by Wing Commander Charlton[4] with Squadron Leader Allshorn, who, as already noted, had served in the Malayan campaign, as next in command and soon to succeed him.

For the operations over the Buna-Gona-Sanananda front all briefings and interrogations for both detached flights were done at Dobodura by the unit's army liaison officer, Captain O'Loan[5] who, in almost constant telephone communication with the two artillery troops and in radio-telephone contact with the Wirraway pilots when in flight, as were the artillery commanders themselves, was one of the hardest-worked officers in the campaign. When airborne the Wirraway so resembled the Zero in

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[4] Gp Capt A. D. Charlton, OBE, 74. Formed and comd General Reconnaissance School 1940-41; comd 5 Sqn 1941-42, 4 Sqn 1942-43; SISO HQ RAAF Cd 1943-44; SOA North-Eastern Area 1944, Northern Cd 1944-46. Regular air force offr; of East Malvern, Vic; b. South Yarra, Vic, 29 Mar 1915.

[5] Maj R. J. C. O'Loan, MBE. 2 Aust Air Liaison Section (OC 1943-45). Commercial traveller; of Waverley, NSW; b. Katoomba, NSW, 26 Mar 1915.

general silhouette that an altitude limit was imposed on it to avoid misleading Allied anti-aircraft gunners. Primarily the Wirraway crews' operations were concerned with tactical reconnaissance but they soon became recognised for their versatility and, their aircraft being the only ones based in the actual battle area, were very quickly in demand for a variety of combat tasks.

It soon became accepted that the squadron was eager for any task within the scope of their aircraft. Thus the role of fighter-bomber was given to them when, on 7th December, each of eight Wirraways dropped two 250-lb bombs on Japanese troop concentrations near Gona Mission. Vulnerable as they were to enemy anti-aircraft fire the crews flew low on most operations since good observation of ground targets was the key to their success. This also made them less conspicuous from the air, so affording them some protection against marauding Zeros. The unit's first casualties occurred on 11th December when two of six aircraft that had been engaged in a bombing attack were lost over the Owen Stanleys. Searches for the missing crews were of no avail. Eight days later Flying Officer Dineen,[6] the pilot of one of the missing aircraft, returned to the squadron at Port Moresby suffering acutely from privation and a wound in one foot. Lost over the mountains in heavy cloud, and low in fuel, Dineen and his observer, Sergeant Winter,[7] had baled out. Dineen landed safely but saw nothing more of Winter. Entirely without food save what palatable berries and roots he could find, he struggled through dense rain forest, following a mountain torrent downstream. On the third day, weak from hunger and fatigue, he attempted to shoot a duck with his service revolver, but slipped and the bullet passed through his right instep. Despite the wound he continued his tortuous journey until, on the fifth day, he reached a village where the natives cared for him for two days before carrying him to Nauro, whence he was brought back to Port Moresby. Some time later a party of the Australian New Guinea Administrative Unit, travelling in the area into which Dineen and Winter had parachuted, and where some of the natives were reported to be hostile, found a fresh grave containing the body of an Australian airman. They recovered a service revolver the number on which tallied with that of the revolver issued to Winter.[8] No trace was found of the crew of the other missing Wirraway—Flying Officer Smith[9] (pilot) and Sergeant Bain (observer). A few days before this crew was lost, New Guinea Force Headquarters had sent a signal to the squadron commending Smith for the excellence of his artillery spotting which had been so accurate that the 25-pounder guns had been able to destroy three enemy anti-aircraft positions at Buna.

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[6] F-Lt A. K. Dineen, 400972; 4 Sqn. Salesman; of Preston, Vic; b. Thornbury, Vic, 2 Sep 1917.

[7] Sgt L. L. Winter, 28395; 4 Sqn. Clerk; of Medindie Gardens, SA; b. Quorn, SA, 17 Aug 1918. Killed in action 11 Dec 1942.

[8] On 15th February 1944 a native was charged at the Port Moresby police station with the murder of an unidentified Australian airman. It was adduced from the evidence as reasonably conclusive that the murdered airman was Sgt Winter.

[9] F-O A. T. Smith, 411613; 4 Sqn. Railway porter; of Armidale, NSW; b. Tingha, NSW, 7 May 1919. Killed in action 11 Dec 1942.

Another serious loss occurred on 22nd December when a Wirraway in which Flying Officer Hockings[1] was flying Major O'Hara[2] of the 2nd Australian Air Liaison Section on a survey flight over the battle area was shot down by enemy anti-aircraft fire. Hockings and O'Hara were both killed and the Wirraway destroyed. The gun which was responsible for their death and which proved to be a naval weapon of the "pom-pom" type, was pinpointed by one of the Wirraway crews. Under their direction A.I.F. gunners destroyed both the gun and its crew with direct hits. The spotting of enemy gun positions was effectively done when other Allied aircraft were attacking, the Wirraway crews noting the enemy anti-aircraft fire and plotting the positions which were passed to the artillery troops as subsequent targets. Contact reconnaissance with ground troops was also effective, the Wirraway crews on several occasions directing parties or units to their destinations. The squadron also added aerial photography to its accomplishments.[3]

On 26th December Flying Officer Archer[4] (pilot) and Sergeant Coulston[5] (observer) were on tactical reconnaissance over a Japanese ship wrecked off Gona when Archer sighted a Zero about 1,000 feet below. Without hesitation he took the advantage offered by his position, put the nose of his aircraft down and fired a five-seconds burst with his Browning .303 gun. The Zero plunged into the sea. Not long afterwards Charlton at squadron headquarters received an understandably elated signal from Dobodura which read, "Archer has shot down one Zeke, repeat one Zeke. Send six bottles beer." The victory was unique; the beer—precious commodity—was sent.

Over the whole front, while the Allied ground troops struggled grimly, digging themselves in to find protection from devastating fire from the Japanese positions only to find their foxholes immediately filling with swamp water, Allied Air Forces strove to aid them. On 24th November American and Australian aircraft assaulted the whole front with repeated bombing attacks which caused an Australian Army diarist to record that "the ground actually shook at times with the bomb blasts".

In spite of Allied air dominance, enemy aircraft were still able to make sneak raids, one of the worst of which occurred on 27th November when 13 Zeros bombed and strafed an Australian medical dressing station situated in a completely open clearing, and an American clearing hospital, both at Soputa. In this raid, which had been preceded three days earlier by a low reconnaissance sweep, 22 Australians, including two doctors,

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[1] F-O G. Hockings, 405250; 4 Sqn. Bank clerk; of Rockhampton, Qld; b. Brisbane, 19 Jun 1916. Killed in action 22 Dec 1942.

[2] Maj W. F. O'Hara. 2 Aust Air Liaison Section. Public servant; of Enfield, NSW; b. Sydney, 20 May 1911. Killed in action 22 Dec 1942.

[3] The demand for aerial photographs could not be met adequately yet Eichelberger later reported that he had learned after the campaign was over that "excellent large-scale aerial photographs had been taken of the combat zone before the campaign was well started".

[4] F-Lt J. S. Archer, 409285. 4, 5 and 75 Sqns. Public servant; of Melbourne; b. Flemington, Vic, 28 Sep 1920.

[5] W-O J. L. Coulston, 19712. 4 and 5 Sqns. Aircraft assembler; of Melbourne; b. Southport, Eng, 1 Aug 1917.

were killed and 50 wounded. The American casualties totalled six dead.

Blamey, writing to the Chief of the Australian General Staff (Lieut-General Northcott) on 7th December, summed up the air situation thus:

> The bulk of our supply has to be taken in by aeroplane and landed on landing grounds that are not very good and sometimes are out of action on account of weather conditions. And while we have air superiority we are unable to utilise it to the full because, as yet, we cannot get strips strong enough to take fighter aircraft. The consequences are that as soon as our protective umbrella returns, the news is flashed from Buna to Lae and the enemy comes out on bombing and strafing expeditions.

With every aircraft operating at full capacity and the advanced air bases becoming established, the transport fleet was now fulfilling one of the most urgent requirements of the ground forces—the air evacuation of sick and wounded. At Popondetta the construction of a second air strip, linked with the original one to provide four runways, greatly improved the medical transport situation. Previously all casualties had to be sent in small boats to Pongani whence they were flown to Port Moresby, but once the two forward air bases had been opened a fairly constant stream of airborne casualties was maintained. Kenney, in a letter to Arnold on 1st January, reported that "around 6,000 men" had been evacuated from the north coast by the air force.[6]

The difficulty in coordinating Allied air attacks with ground force movements was a continuing problem and occasional accidents occurred, as when a Salvation Army coffee stall, resolutely set up only a mile behind the forward Australian positions, was bombed by "friendly" aircraft, and when advanced Australian units in the Gona area were strafed in error by a R.A.A.F. aircraft.[7]

These mistakes prompted the development of special planning which distinguished between attacks on targets well beyond the Allied front line and those which must be very precisely coordinated with the infantry's own time-table. New Guinea Force Headquarters and Advon Fifth Air Force exchanged senior liaison officers to achieve coordination at high level in the field, and army officers were selected to fill the post of liaison officer with each squadron, their chief task being to share in the briefing and interrogation of pilots.

With the Japanese now concentrated at Lae, Salamaua and their Buna-Gona beachheads, many targets were offering to the crews of raiding Allied aircraft, notably the Beaufighters, Bostons, Mitchells and Marauders. On 2nd December Beaufighter crews from No. 30 Squadron sank two troop-laden enemy barges not far from the Gona shore. The Beaufighter crews, seeing ropes trailing on the seaward side of the Gona wreck, strafed it. Later it was found that the enemy was using the stranded vessel as a radio station and anti-aircraft battery position. To bomber crews flying at

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[6] From Dobodura alone the transports moved an average of more than 100 patients a day in the December-early January period, the peak being reached on 8th December when 280 casualties were flown out.

[7] In this phase Allied aircraft attacked their own troops and inflicted casualties on at least six occasions.—Craven and Cate, Vol IV, p. 126.

medium to high altitude the wreck, which lay bow-on to the prevailing current, which caused a wash at her stern, often appeared as a ship under way. Not infrequently Allied airmen mistook the wreck for an enemy transport moving along the coast, and promptly reported the sighting. Such reports irritated not only the Intelligence officers who received them but Whitehead himself. The general's reaction to these false sightings became the subject for a five-stanza parody of "Casabianca", the opening line in which was "The boy looked on the Gona Wreck. . . ." Despite their levity there was, to those who knew Whitehead, a very real warning implicit in the last two stanzas:

> The General puckered up his brow
> And issued this directive:
> "That wreck's a wreck," he cried, "by heck!"
> (And added some invective).
>
> "If anyone who to Gona goes,
> Says elsewise—on my honour,
> That same goon who's to Gona gone
> Is gona be a goner!"

So heavy were the Allied air attacks on Lae that when six Beaufighters and five R.A.A.F. Bostons made low-level sweeps over the aerodrome on 7th December, the crews found it difficult to distinguish undamaged enemy aircraft on the ground because of the amount of wreckage that littered the target area. Enemy troops were strafed in these attacks, which the Japanese resisted with heavy anti-aircraft fire, but only one Australian aircraft was hit, a Boston piloted by Flying Officer Wines[8] who was still able to bring it into base and make a crash-landing without casualties. Meanwhile a party from No. 22 Squadron had flown to Kokoda in a Boston piloted by Flight Lieutenant Sladen,[9] one of the unit's most experienced officers, to retrieve another Boston, piloted by Flying Officer Turner,[1] which had been forced down on a small clearing near Wairopi after making an attack on Sanananda Point. Sladen, accompanied by Flying Officer Chester[2] and Sergeants Williams[3] and Kendell,[4] walked from Kokoda to the scene of the forced landing carrying supplies and equipment. After stripping Turner's aircraft, which was undamaged, of its guns and all other movable equipment, and draining the surplus fuel, the two Boston crews worked for several days clearing trees and undergrowth to make space for take-off. Though delayed by bad weather, which made the ground boggy,

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[8] F-Lt R. A. Wines, DFC, 402432; 22 Sqn. Bank clerk; of Rose Bay, NSW; b. Parkes, NSW, 2 Jun 1916. Killed in aircraft accident 11 Dec 1944.

[9] Sqn Ldr C. R. M. Sladen, DFC, 1765. 22 Sqn and CFI at advanced flying schools. Regular airman; of Newcastle, NSW; b. Grafton, NSW, 10 Oct 1913.

[1] F-Lt G. St C. Turner, 411205. 22 and 67 Sqns. Bank clerk; of Gordon, NSW; b. Cambridge, Eng, 11 Jan 1919.

[2] Sqn Ldr J. F. Chester, 401028. 205 Sqn RAF, 22, 67, 73 and 24 Sqns. Clerk; of Mildura, Vic; b. Manchester, Eng, 17 Mar 1916.

[3] Sgt B. L. Williams, 207715; 22 Sqn. Regular airman; of Five Dock, NSW; b. Orange, NSW, 5 Oct 1917.

[4] Sgt G. S. Kendell, 41980. 22 and 4 Sqns. Fitter; of Geelong, Vic; b. Geelong West, 1 Dec 1909.

Sladen succeeded in taking the aircraft off and flying it safely back to Port Moresby while the rest of his party and the original crew walked back to Kokoda and flew Sladen's aircraft to base. On 10th December No. 22 Squadron made an attack on enemy positions at Buna with six aircraft led by their new commanding officer, Wing Commander Hampshire,[5] who had succeeded Squadron Leader Bell.

About this time General Blamey was pressing Mr Curtin for the return of the 9th Division from the Middle East. He emphasised that after Buna the 6th and 7th Divisions would need prolonged rest. For the defence of Papua he must therefore rely for a time on Australian militia formations in which his faith was growing, and the American forces in which his faith had "sunk to zero". If the 9th Division was not returned he feared that for a long time the defence of the area would depend mainly on "keeping the Japanese flotillas away by air action".

With the troops of the 32nd American Division in very sore trouble, Lieut-General Eichelberger had arrived at Port Moresby by air on 30th November to take over the American command in the Buna area. He came, at MacArthur's express direction, "to take Buna or not come back alive".[6] A week later, despite evidence of weaknesses among the American troops that would have been dispiriting to any commander with less fortitude and determination, he had succeeded in restoring order and, under the influence of individual acts of bravery and resource among his officers and men, and the promise of reinforcements, had achieved a distinct improvement in morale. In this the crews of the detached Wirraway flights served as a valuable stimulant. Eichelberger was keenly aware of this and quoted their operations as exemplary. The work of Flight Lieutenant Ifould[7] who, particularly between 14th and 18th December, repeatedly flew at low altitudes inviting enemy anti-aircraft batteries to open fire and so disclose their positions to which he then directed Allied artillery fire, received his special commendation, as did that performed by Flying Officer Mowbray[8] who, on the 15th, despite steady fire from several anti-aircraft posts, dived his aircraft to tree-top height to locate their exact positions and returned several hours later to direct artillery fire against them. Mowbray's aircraft had a large hole torn in its port wing by enemy shellfire, but he flew it safely back to base.

There was further cause for relief when the stalemate that had developed along the whole front was broken by Australian troops who, by the end of the first week in December, had succeeded in closing in on Gona Mission. The 21st Brigade, having relieved the 25th which had suffered grievous losses, overthrew the enemy's garrison at the mission on 9th December

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[5] Gp Capt K. McD. Hampshire, DSO, DFC, 147. Comd 6 Sqn 1941-42, 23 Sqn 1942, 22 Sqn 1942-43, 456 Sqn 1943-44. Regular air force offr; of Peppermint Grove, WA; b. Port Macquarie, NSW, 10 Sep 1914.

[6] R. L. Eichelberger, *Our Jungle Road to Tokio* (1950), pp. 20-2.

[7] F-Lt E. M. Ifould, 403744. 4 and 5 Sqns. Irrigation expert; of Turramurra, NSW; b. St Peters, SA, 29 Nov 1910. Killed in aircraft accident, 21 Sep 1944.

[8] Sqn Ldr J. R. Mowbray, 405417. 4 and 5 Sqns; comd 4 Sqn 1944-45. Bank clerk; of Ballarat, Vic; b. Ballarat, 7 Nov 1912.

after a series of fierce encounters. Next day enemy aircraft succeeded in parachuting supplies to the Buna garrison (it was their last air drop on this front) but it was obvious from the state of the Gona defences, when captured, that the remaining Japanese positions, though still offering determined resistance, must now be desperately short of supplies.

Close attention was now being given by the Allied forces to enemy endeavours to build up strength at the mouths of the Mambare and Kumusi Rivers. In this the efforts of Australian ground forces and Allied aircrews were greatly aided by two coastwatchers, Lieutenant Noakes[9] and Sergeant Carlson.[1] Noakes would worm his way through filthy swamps and sneak close to the Japanese positions, note their exact dispositions, and pinpoint them in relation to a particular sandy beach that was clearly visible from the air. Carlson would transmit Noakes' coded messages and Allied aircrews would put their bombs accurately on the target.

The enemy's resistance was gradually broken until, within about two weeks of their loss of Gona Mission, they had forfeited their hold on the front from the mission to the Kumusi. But the Japanese still held fast at Buna and on the Sanananda Track.

The promised support for the 32nd Division materialised on the night of 14th-15th December when Australian corvettes, having moved up the coast from Milne Bay, steamed into Oro Bay and disembarked the 18th Brigade under Brigadier Wootten and two troops of Australian-manned General Stuart tanks from the 2/6th Armoured Regiment, recently arrived in Papua.[2] By the 17th the tanks were in the assembly area. It had been planned that the noise of their engines should be covered by that from low-flying aircraft, but, for some reason not explained, the coordination failed and the chance of detection had to be accepted. The spearhead for the attack was provided by the tanks and the 2/9th Battalion, with three battalions of Americans in support.

The battle opened on the morning of the 18th. The strong air support, planned for its opening phase, was denied by bad weather but the tanks, with the Australian infantry immediately following and preceded by an artillery barrage, made one of the most dramatic attacks of the campaign. Their assault was herculean. Under its weight the enemy's till then almost impregnable defences were gradually subdued.

Making up for their exclusion by the weather from the opening day of this battle, No. 30 Squadron's Beaufighter crews made repeated and heavy strafing attacks on the enemy's positions and on Japanese troops who strove vainly to retrieve the Cape Endaiadere sector.

Buna itself was now the most immediate Allied objective. A bitter struggle in which the American troops wrestled for possession of the Government Station, went on for the next two weeks. On New Year's

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[9] Lt L. C. Noakes, NGVR; AIB ("Z" Special Unit 1942-43, "M" Special Unit 1944). Geologist; of Wau, TNG, and Pennant Hills, NSW; b. Epping, NSW, 9 May 1914.

[1] Sgt L. T. W. Carlson. "Z' and "M" Special Units. Presser; of Paddington, NSW; b. Paddington, 3 Apr 1919. Killed in action 24 Oct 1943.

[2] A troop normally consisted of 3 tanks.

Day, 1943, the Japanese resolution began to break. Eichelberger, indefatigable as ever, pressed home every advantage and, on 2nd January, the reward came; his troops, with strong support from the 18th Brigade, forced their way into the bomb-blasted and shell and bullet torn base that once had been a trimly-kept Government station—Buna had fallen. Wirraways attended the troops in their final stage of this battle. Flying low, five crews attacked Japanese troops attempting to escape in small craft or by swimming towards Sanananda. Their machine-gun fire killed a number of the fugitives. One of the Wirraways piloted by Flying Officer Boydell,[3] with Sergeant Cole[4] as observer, was forced to make a wheels-up landing in a patch of kunai grass near Soputa. The aircraft was wrecked but the crew escaped uninjured.

High overhead also a change was taking place. American fighters were now achieving the objective long sought by Kenney and, more immediately, by Whitehead—unquestionable superiority over the enemy in strength and performance. Late in November the Lightnings had begun operations in New Guinea skies but some weeks were to pass before the pilots reached the stage of confidence that underlies all good fighter combat performance. The first resolute interception by Lightning pilots occurred on 27th December. Twelve aircraft in three flights swept down on a formation of 7 Japanese dive bombers and 20 fighters over Cape Endaiadere. When the battle was over the American pilots claimed 9 enemy fighters and 2 dive bombers shot down for no loss; only one of the Lightnings suffered in combat and its pilot made a successful forced landing at Dobodura. When, on 1st January 1943, the Lightning pilots had a similarly successful encounter with Zeros, Whitehead, conscious of the significance of these victories, went so far as to declare: "We have the Japanese air force whipped."[5] An aid to these and later victories was the installation of a radio station at Dobodura which could call the Lightnings into action with direct ground-to-air information on the movements of enemy aircraft formations.

Whitehead kept his aircraft hammering periodically at the enemy's air bases at Lae and Salamaua to prevent them building up their aircraft strength. On 8th January, with Lightnings giving cover, Beaufighters, Bostons, Mitchells and Marauders made a particularly heavy assault on Lae. The Beaufighters led the attack and met with a strong barrage from

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[3] F-Lt R. S. Boydell, 411278. 4, 5 and 24 Sqns. Clerk; of Sydney; b. Sydney, 25 Mar 1922.

[4] F-O A. E. Cole, DFM, 35725. 4 and 107 Sqns. Bank clerk; of Enfield, NSW; b. Artarmon, NSW, 11 Oct 1920.

[5] The Zero meanwhile had undergone substantial modifications since the first A6M2 model with a Sakae-12 engine was produced in December 1939. To gain higher altitude the Sakae-12 engine, which had given remarkable long-range performance, was replaced (in July 1941) with an A6M3 model which had a shorter wing-span and a Sakae-21 engine with a two-speed supercharger developing 1130 h.p. instead of 940 h.p. This, however, reduced the range and when the Japanese began to appreciate the burden of the Guadalcanal campaign, which imposed a flight distance from Rabaul of approximately 640 miles, this loss in range had to be regained. The original wing-span was restored and an additional 10-gallon fuel tank was placed beneath each wing thus adding about one hour to its flight endurance. But these and other attempts at improvement still left the problem of quantity production and of performance characteristics inadequately answered when compared with the increasing numerical strength, fire power and flight performance of the latest American fighter aircraft.—Masatake Okumiya and Jiro Horikoshi with Martin Caidin, *The Zero Fighter* (1958), pp. 185-95.

the anti-aircraft guns of destroyers in the harbour. Considerable damage was done to grounded enemy aircraft. The American bombers, following in, caused a large fire in the wharf area which in turn caused an explosion. Two of six Zeros attempting interception were shot down by the Lightning pilots. That afternoon the attack was repeated. In addition to grounded aircraft the Beaufighters strafed a number of laden barges two of which were left in flames. A transport off Voco Point was heavily strafed. One Mitchell crew scored a direct hit on a transport and others bombed and blew up an ammunition dump on the Terrace, a ridge flanking the town.[6]

Japanese fighter retaliation was confined to attempts at interception by individual aircraft. The Beaufighter crews, who were not intended to engage in fighter combat as such, met this by turning in steeply towards the attacking aircraft and then diving to fly low over the sea at full throttle to evade the attack. Only one Beaufighter was hit in these encounters and it was not seriously damaged. Another Beaufighter was damaged by anti-aircraft fire but got back to Port Moresby. Next day Beaufighter crews gave air rescue aid to several American airmen who were sighted on a beach to the north of the Mambare River and to whom they dropped supplies and maps. Similar aid was given on the 10th to a solitary American airman who had inscribed in large letters on the sandy beach the words, "Shoes, maps, food, matches." The Australians dropped boots, a flying suit, food, medical and other supplies and maps. That day Lae was again attacked by Beaufighters in concert with American bombers. After the raid Beaufighter crews reported fires which were visible 40 miles away from the target area. The only cost to the attackers was that a Beaufighter piloted by Flying Officer Sandford[7] was holed by anti-aircraft fire.

This attention to Lae, in particular, was in no sense fortuitous. Allied Intelligence was keeping well abreast of enemy movements and early in January these gave every indication of a very determined further endeavour by the Japanese to tighten the only firm grip they now held in New Guinea —their grip on the Huon Gulf coast. It was one of Kenney's special tasks to try to prevent this; in fact to loosen that grip by endeavouring both to prohibit reinforcement and to damage the existing enemy defences. For this reason armed reconnaissance over Rabaul and the sea route leading to the Huon Gulf was of the utmost importance. At the end of December the crews of Australian Catalinas, and American Flying Fortresses and Liberators, reported the heaviest concentration of Japanese ships in Simpson Harbour yet known: about 21 warships and 69 merchant ships (estimated at 300,000 tons aggregate).

Enemy float-planes were sighted in the vicinity of Lae; experience suggested that they were on anti-submarine patrol preceding a substantial convoy movement. This was an accurate prediction. On 6th January Allied reconnaissance aircraft reported an enemy convoy of four transports

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[6] One result of these attacks was the sinking of the *Myoko Maru* (4,103 tons) near Lae.

[7] Sqn Ldr J. T. Sandford, DSO, DFC, 400602. 25 Sqn RAF and 30 Sqn; Instructor 5 OTU 1943; comd 30 Sqn 1944. Accountant; of Hawthorn, Vic; b. Armadale, Vic, 13 Apr 1915.

escorted by a light cruiser and four destroyers on course from Rabaul and steaming round the southern coast of New Ireland. Low cloud made air attacks on the enemy ships difficult but breaks in the overcast permitted some observation and opportunity for attack. A Catalina from No. 11 Squadron, piloted by Flight Lieutenant Vernon,[8] found the ships when they were south-east of Gasmata. While another Catalina, piloted by Squadron Leader Stokes,[9] shadowed the convoy, Vernon turned his attention to Gasmata aerodrome, on which he dropped 20-lb fragmentation bombs and then strafed two grounded Zeros. Well after nightfall Vernon, attracted by flares dropped by American bombers searching for the same quarry, returned to the convoy. The four transports were steaming in line ahead. After his bomb-aimer, Flying Officer Leslie,[1] had released four bombs from about 4,000 feet, the Catalina crew saw flames rise from the third ship in the line and then a heavy explosion amidships. A Japanese destroyer turned on a searchlight and revealed a stricken ship whereupon Vernon promptly descended to low level while his gunners strafed the transport. The destroyer quickly extinguished its searchlight and altered course.

Reconnaissance next day proved that the transport, *Nichiryu Maru* (5,447 tons), had been sunk. Beaufighters were sent out to attack lifeboats from the lost ships. Their crews later reported finding only a whaler with six men in it and four empty ships' boats all of which were strafed, the whaler being sunk. Two formations of Zeros, one of nine and the other of six, intercepted the Beaufighters, two of which, one piloted by Flight Lieutenant Little and the other by Pilot Officer Vial,[2] were damaged by the enemy fighters' gunfire, but were still able to fly back to Port Moresby. Vial and his observer, Flight Sergeant Nelson, damaged two of the Zeros both of which were last seen losing height and leaving smoke trails behind them. A third Zero was also seen falling away after being hit by cannon fire from the guns of a Beaufighter manned by Flying Officer Roe[3] (pilot) and Flight Sergeant Fisken[4] (observer). On the same day five Bostons from No. 22 Squadron were sent in to hit the Lae runway and prevent its use by fighters giving cover to the approaching convoy. Wines again had the experience of flying his aircraft back to base in a badly damaged condition—this time with the hydraulic equipment made unserviceable by anti-aircraft fire—and he again crash-landed his aircraft without harm to himself or his observer.

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[8] W Cdr D. Vernon, DSO, 462. 10 and 11 Sqns; SO Operations Eastern Area 1944; SO Operations and Training Northern Cd 1944-45. Regular air force offr; of Greenwich, NSW; b. Middlesborough, Yorks, Eng, 29 May 1915.

[9] W Cdr T. V. Stokes, DFC, 250279. 10 and 20 Sqns; comd 107 Sqn 1943-44, 76 Wing 1944; RAAF LO Coastal Cd RAF 1944-45. Salesman; of Toorak, Vic; b. Brighton, Vic, 21 Jan 1916.

[1] F-Lt W. G. Leslie, 408216; 11 Sqn. Bank clerk; b. 12 Feb 1916.

[2] F-Lt L. S. Vial, 400473. 456 and 30 Sqns. Bank officer; of Mansfield, Vic; b. Camberwell, Vic, 27 Mar 1918.

[3] F-Lt R. H. Roe, DFC, 400488. 456 and 30 Sqns. Public servant; of Benalla, Vic; b. Benalla, 2 Aug 1917. Killed in aircraft accident 4 Sep 1943.

[4] F-Lt P. A. Fisken, 8013. 12, 30 and 5 Sqns. Postal assistant; of Kilkenny, SA; b. Kilkenny, 19 Mar 1920.

That night the Japanese convoy succeeded in reaching Lae. From Milne Bay five Hudsons of No. 6 Squadron and five Beauforts of No. 100 Squadron were sent in to attack the ships in darkness. The Beauforts had made an attempt to attack the ships earlier in the day but had been forced by bad weather to turn back. One Beaufort crew, captained by Squadron Leader Douglas, seeing three ships apparently hove to, dropped four bombs and saw two explosions. The Hudson crews were dropping flares and 250-lb bombs, the latter with unobserved results except for Flight Lieutenant White[5] and his crew who were credited with a possible hit. Attempts by Mitchells and Marauders to hit the enemy ships were no more successful.

Early next morning three Beaufighters, sweeping the coast from the Amboga River to Salamaua, reported three enemy ships standing out to sea off Lae. One damaged transport had been beached. Meanwhile eleven more Beaufighters were making rendezvous with formations of Mitchells and Marauders for a combined attack on the enemy ships, barges and small boats, and dumps of supplies that had been landed during the night. The Beaufighters led this attack, their task being to neutralise the runway. Led by an aircraft piloted by Squadron Leader Lansell,[6] they flew in through intense anti-aircraft fire from ship and shore batteries. Their targets included eight grounded Zeros several of which were damaged and one left blazing. The medium bombers damaged barges in the harbour, scored one near miss on a transport, and caused a large fire in the wharf area which in turn caused an explosion. In a similar attack that afternoon an ammunition dump was blown up, several barges set on fire, and a Mitchell crew scored a direct bomb hit on a transport.

In the face of all these attempts to thwart them the Japanese had still succeeded in the main; most of their troops (later estimated as at least 4,000) had been put ashore together with most of their supplies (though these had been considerably damaged) and the convoy, still substantially intact, was now steaming back to Rabaul.

A night torpedo attack by six Beauforts from No. 100 Squadron was the main feature of the continuing Allied efforts to exact as great a price from the enemy as possible. The Beaufort crews found the ships soon after dark as they were approaching Gasmata. The only success in this assault was achieved by the crew of an aircraft piloted by Flight Lieutenant Hamblin[7] whose torpedo was launched at the light cruiser in which a heavy explosion was observed. In the absence of any sighting of this vessel by reconnaissance crews next morning it was presumed that the ship had been sunk. But the mission proved costly indeed for No. 100 Squadron. Returning in the darkness the crews of the Beauforts found their base at Milne Bay heavily shrouded by low-lying cloud. Two crews and their aircraft were lost. One crashed into a hillside close to Milne Bay, and a second crew also

[5] Sqn Ldr G. J. White, 280541. 1, 6 and 21 Sqns. Radio engineer; of Broadview, SA; b. Adelaide, 25 Apr 1915.

[6] W Cdr E. V. Lansell, 81. 31 and 30 Sqns; comd 1 ATS 1940-41. Regular air force offr; of Melbourne; b. 21 May 1916.

[7] W Cdr C. S. Hamblin, 400. 7, 100 and 32 Sqns; comd 8 Sqn 1944-45. Regular air force offr; of Elsternwick, Vic; b. Farnborough, Eng, 4 May 1918.

failed to return; eventually the wreckage of their aircraft was found where it had crashed on a hill on Normanby Island.

The Japanese had in fact paid a heavy price for their achievement. They had lost two transports and, in aircraft shot down (chiefly by the Lightning pilots) and destroyed on the ground in the three days (6th, 7th and 8th), their losses were estimated at 69 destroyed, 28 probably destroyed and 40 damaged.

While the enemy had been making this desperate attempt to reinforce Lae, their troops in the Sanananda sector were now really experiencing desperation. Even so they clung fanatically to their defences and the deadlock continued until, on 15th January, their resistance began to crack in the Cape Killerton sector, where Japanese soldiers started to retire in some disorder. In the next week the Australians and Americans increased their pressure and the defences in this swampy coastal pocket were gradually overpowered, won literally yard by bloody yard from desperately fighting foes. By 22nd January the struggle for Sanananda, and indeed for Papua, had ended.

Even before the campaign was over Kenney, writing to Arnold on 1st January, said typically: "We learned a lot and the next one will be better." Most of the lessons learned were revealed by the air statistics of the campaign. From 26th August until it ended the ground forces made 110 requests for air support. In 15 of these the targets were judged unsuitable and missions were not undertaken, 12 had to be refused for lack of aircraft, and 11 were prevented by unfavourable weather. For the remaining 72 missions 586 aircraft sorties were flown to drop 237 tons of bombs and fire 400,000 rounds of ammunition. Only 121 of these sorties (dropping 40 tons of bombs and firing 97,000 rounds of ammunition) were flown in direct support of land force actions. A high priority had been given to attacks on convoys and long-range strikes against enemy shipping and, though the percentage of failures in these strikes had been high, it had diminished appreciably as the crews gained in experience, and the commanders studied and corrected weaknesses. Early in January the Japanese were no longer in doubt that to them the waters within reach of the Allied bombers were extremely dangerous. MacArthur's lack of naval strength had now become less conspicuous, at least to those aware of the improvement in Allied bombing tactics. The enemy's control of the seas within range of the Allied air units based on Australia, New Guinea and the Solomons, had at last been challenged successfully. For the first time since the war with Japan began Allied aircraft had true command of the air. As one Japanese diarist noted, even as early as 3rd December, "they fly above our position as if they own the sky"—a comment that was the complete reverse of the situation in those bitter days when the skies over the Philippines, Malaya, the Netherlands East Indies and, not so long ago, New Guinea, were dominated by supremely confident Japanese fighter pilots.

Eichelberger, summing up for war correspondents at his New Guinea headquarters, admitted with typical frankness that throughout the cam-

paign he had under-estimated the Japanese strength but that finally he had not been prepared for the rapid cracking of their defences at Sanananda. Of the part played by the Allied Air Forces he noted particularly the prevention of enemy reinforcements on the Buna coast—those troops that did get in did so at an extremely heavy cost. In the decisive stages the opposing ground forces had been so close that aerial bombing and strafing could not be exploited. Of the Australian Wirraway crews Eichelberger remarked: "I never hope to fight with braver men."[8]

General MacArthur paid unqualified tribute:

> To the American Fifth Air Force and the Royal Australian Air Force (he said) no commendation could be too great. Their outstanding efforts in combat, supply and transportation over both land and sea constituted the keystone upon which the arch of the campaign was erected. They have set up new horizons for air conduct of the war.[9]

At a press conference on 25th January the Commander-in-Chief elaborated, saying that the outstanding lesson of the Papuan campaign had been "the continuous, calculated application of air power in the most intimate tactical and logistical union with ground troops . . . air forces and ground forces were welded together in Papua, and when in sufficient strength, with proper naval support, their indissoluble union points the way to victory through new and broadened strategic and tactical conceptions".[1] In this as in all his public statements, MacArthur was very naturally emphasising his needs for reasons of propaganda. But he was also making emphatic if implicit acknowledgment of the validity of Kenney's "gospel" of air transport as basic to the planning and the execution of land warfare in his area. Kenney, for his part, need no longer concern himself with the studied opposition to this concept raised by G.H.Q. staff: he had won that battle completely. It was clear that the ebb and flow of fortune in the whole Papuan campaign sychronised with the ebb and flow on the supply lines of the opposing forces. Without detracting from the quite remarkable courage, tenacity and skill of the ground troops in battle, it can be asserted that the defeat of the Japanese on the Papuan beach-heads, like their defeat on the Kokoda Track, had been brought about ultimately by attrition; they had perished at the extremity of a supply line that failed them.

> With the dawn the enemy starts shooting all over (a captured Japanese diary records). All I can do is shed tears of resentment. Now we are waiting only for death. The news that reinforcement had come turned out to be a rumour. All day we stay in the bunkers. We are filled with vexation. Comrades are you going to stand by and watch us die? Even the invincible Imperial Army is at a loss.

Throughout this period the Catalinas of Nos. 11 and 20 Squadrons had been carrying out their varied tasks over a wide area: harassing night attacks, supply-dropping to coastwatchers, anti-submarine patrols. Although

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[8] Charles Buttrose, *Sydney Morning Herald*, 27 Jan 1943.
[9] *New York Times*, 11 Jan 1943.
[1] Melbourne *Herald*, 26 Jan 1943.

under the control of North-Eastern Area their work took them, as has been seen, as far afield as North-Western Area.

In August the Catalinas' night raids were concentrated mainly against Rabaul and Lae. In September and October Buka and Buin-Faisi were the main targets. On 5th November the Catalinas began to carry out a nightly mission that became known as "the milk run". This was a regular reconnaissance of Japanese shipping and submarine routes to Lae and Finschhafen both from the north and along the south of New Britain. The patrolling aircraft left their base in time to reach the approaches to the area at dusk, and usually alighted at Milne Bay or Port Moresby next morning to refuel before returning to Cairns, where the two squadrons were based from this month onwards.

In December the "milk run" aircraft began making harassing attacks on enemy bases in the area of search, particularly Gasmata. At this stage the Catalinas each carried about 440 pounds of small fragmentation and incendiary bombs. These had to be thrown out of the blisters by hand.

In the first quarter of 1943 the Catalinas bombed Gasmata, Rabaul, Kahili, Finschhafen, Buka and other enemy bases. On the night of 24th March Squadron Leader Burrage[2] of No. 11 set out for Ea Ea on the north coast of New Britain to rescue an Australian private who had been at large since the fall of Rabaul 14 months before and three American airmen who had been missing for 10 months. He found the party, to whom signalling instructions had been dropped. Burrage dropped six flame floats to make a flare path, alighted, took aboard the four men, and also three natives, and delivered them to Port Moresby.

In the first week of April the flying-boat crews continued to make their resolute attacks on enemy bases. Thus on the night of the 2nd-3rd an aircraft captained by Squadron Leader Vernon bombed Madang, then Alexishafen, then Cape Gloucester and then Gasmata. On the night of the 5th two Catalinas led by Wing Commander Green[3] bombed Buka, still a favourite target. The bombs started four intense fires which were believed to be aircraft burning in the dispersal area and another bright fire which burnt for two hours and a half.

From 1st December 1942 to 31st March 1943 No. 11 Squadron's aircraft flew 10,523 hours and dropped 253 tons of bombs and No. 20 Squadron's aircraft flew 9,629 hours and dropped 227 tons.

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[2] Gp Capt R. B. Burrage, OBE, DFC, 212. 10 Sqn, 202 Sqn RAF and 11 Sqn; comd 461 Sqn 1942, 76 Wing 1944-45. Regular air force offr; of Melbourne; b. Auburn, Vic, 13 Sep 1917.

[3] Air Cmdre R. F. M. Green, CBE, DSO, 146. Navigation Offr Southern Area HQ 1941-42; comd 4 FSHQ Port Moresby 1942, 43 OBU Milne Bay 1942-43, 11 Sqn 1943-44, General Reconnaissance School Bairnsdale 1944, RAAF Stn Pearce 1944-45; SASO RAAF Cd 1945. Regular air force offr; of Pingelly, WA; b. Pingelly, 4 Feb 1916.

CHAPTER 32

WAU AND THE BISMARCK SEA

THE defeat of the Japanese both in Papua and Guadalcanal represented the accomplishment of Task I as set out in the Joint Chiefs of Staff directive of 2nd July 1942. It will be recalled that Task II in this directive was the ejection of the Japanese from New Guinea and the investment of the northern Solomons. The primary responsibility for this task was placed on General MacArthur who, for its purposes, was to have supreme command; supreme command, that is, on the western front with COMSOPAC undertaking the detailed planning on the Solomons front, but accepting MacArthur's authority for the coordination and timing of the operations.

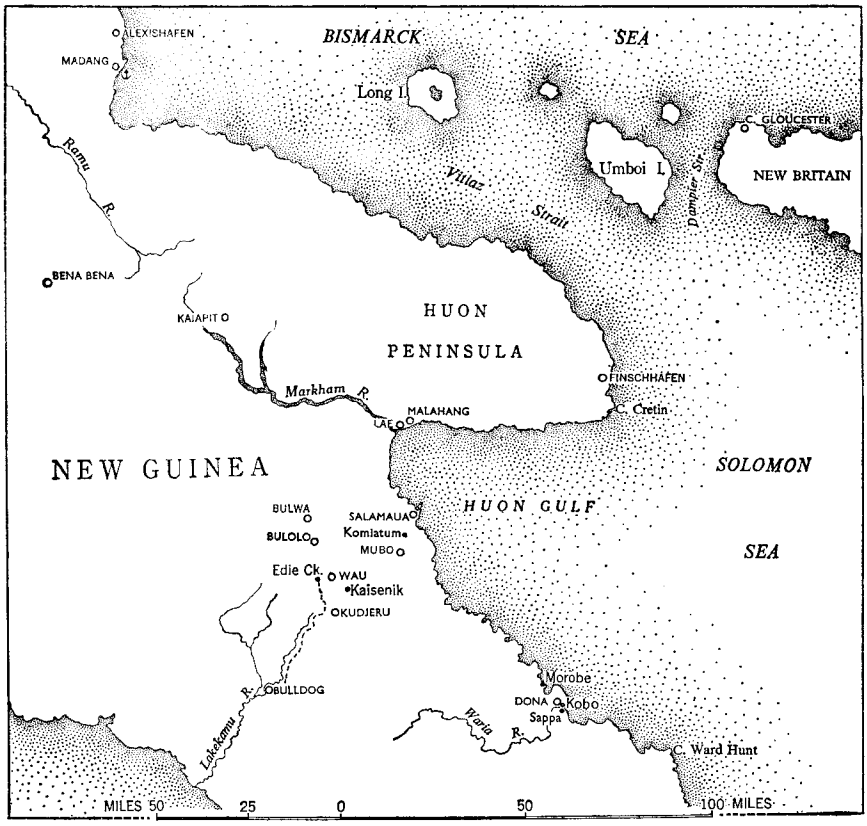
Already, in February, MacArthur was planning for a series of advances that would take him back to the Philippines—planning that would be put into action long after the period with which this volume deals. Meanwhile he and General Kenney had to contend with the immediate reaction of the Japanese to their defeat in Papua.

Since that defeat the only Allied land force immediately in contact with the enemy in the Pacific areas was the Australian Kanga Force, in the Wau-Salamaua-Lae area. At the end of August the Japanese had pushed forward a strong force to Mubo, about 12 miles south-south-west of Salamaua, and Kanga Force had withdrawn its main base to Kudjeru at the start of the Bulldog Track, a route which had always been of tactical significance because of the likelihood of its use by the Japanese as an approach to Port Moresby. Since then the Japanese had maintained their forward position and the opposing forces in the area had been engaged in counter forays in a little war of their own. Kanga Force continued its "watching brief" until, in mid-January, it engaged the Japanese at Mubo in what for them was a major operation. It was a fierce engagement employing about 300 Australians and 400 native carriers. Partially successful, it resulted in the substantial reinforcement of the Japanese at Mubo and the arrival in the area of the first elements of the 17th Australian Brigade who had begun an air move into Wau on 14th January, and whose arrival ended the guerilla phase of the operations of Kanga Force.

The entry into action at this stage of the 17th Brigade, veteran troops from the campaigns in North Africa, Greece and, in part, Crete and Syria, reflected General Blamey's foresight. The brigade had reached Milne Bay in October but the Land Forces Commander, sensing the likelihood of a Japanese thrust on Wau in anticipation of Wau becoming an even more serious threat to their own hold on Lae and Salamaua, would not commit the brigade to the Gona-Buna-Sanananda front.

Wau lay 3,000 feet above sea level. From the south the land approaches were through some of the wildest and most rugged country in the world —massive mountain ranges with peaks rising to 8,000 feet, more frequently

than not covered in swirling cloud; precipitous gorges torn by rushing torrents, and dense rain forest, the whole drenched at frequent intervals by heavy tropical storms. From Port Moresby the only practicable route to Wau was a very rugged foot track, from the Lakekamu River which empties into the Gulf of Papua about 150 miles north of Port Moresby, northward for 50 miles to Bulldog, thence to Kudjeru, on to Kaisenik and



thence into Wau. From Wau to Salamaua there were various and devious tracks.

Soon after the Japanese invaded New Guinea, Blamey, acutely aware of the lack of a south to north overland transport route, studied the charts closely and noted the Bulldog-Wau track as the most practicable route for a road. At his orders Australian engineers began the formidable task of constructing this road which Blamey anticipated would be completed in about four months.

Meanwhile, with the Japanese threat to Wau building up, the only answer to the all-important problem of supply lay in air transport. Long

before war came to New Guinea aviation history had been made in the Wau-Bulolo-Edie Creek area. Junkers aircraft, skilfully piloted by airmen who knew the tortuous route between the mountain peaks and the always treacherous weather, alighted on Wau's steeply set landing ground to deliver huge consignments of mining machinery. Now a new and a very different chapter was to be added to this history. A grassed field 3,300 feet long, Wau aerodrome had the distinction that its "upper" threshold, disconcertingly, was 300 feet higher than its lower threshold, and since it headed into the mountains there was but one approach for aircraft.

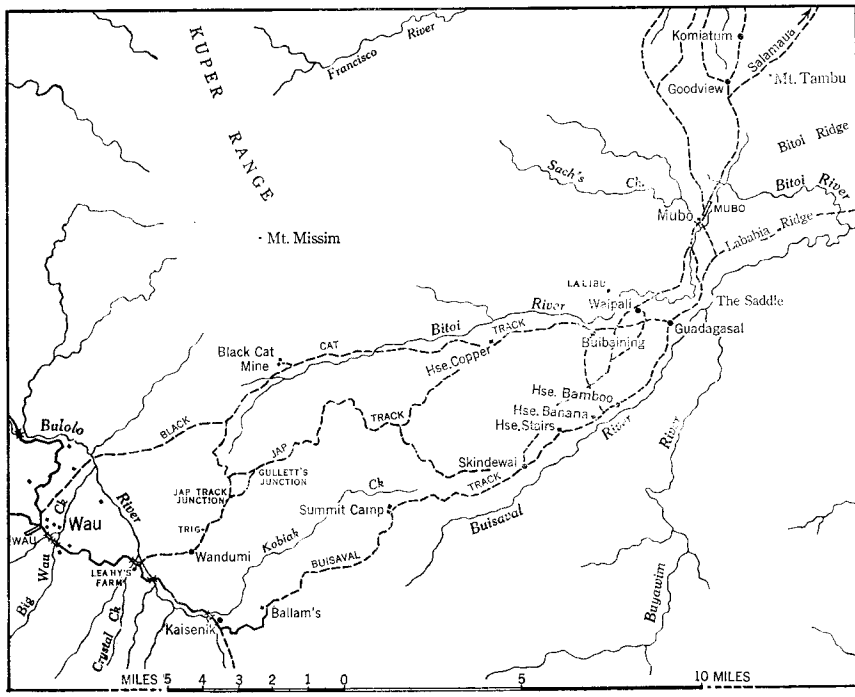
The first airborne reinforcements for Kanga Force—the 2/7th Independent Company—had arrived in October in Douglas transports, two of which had been borrowed from Australian National Airways. Flying as second pilots to the captains of these two aircraft were Flight Lieutenants Mather and Fader, Catalina pilots with a good knowledge of the territory, both of whom had been co-opted as guides and navigators.

On 15th January, the day after the air move of the first troops of the 17th Brigade into Wau, ten transports took off with more men of the 2/6th Battalion. The movement was accomplished without a hitch, but next day the weather lowered its impenetrable barrier. Six aircraft carrying further troops of the 2/6th, including Brigadier Moten[1] of the 17th Brigade who had been assigned to the command of Kanga Force, and his headquarters staff took off, but the whole formation was forced to return. Next day several aircraft, one of them carrying Moten, did get through, though four were caught by cloud and so were forced back. On the 18th ten transports were over Wau early, carefully shepherded, as always, by their fighter escort. One of these crashed just short of the aerodrome and eight on board were killed. Only 49 troops were landed from this formation, the rest of the pay load being supplies.

This operation prompted Moten to complain that the transport arrangements were uneconomical and haphazard. While his reaction was understandable—he was responsible for the defence of a key base in circumstances that could scarcely have been more critical—these were early days to complain. More than 100 reinforcements were flown in on the 19th. On the 23rd and 24th more than 30 transports came in each day bringing quantities of supplies and the advance elements of the 2/5th Battalion, who moved swiftly into action against the approaching Japanese who now were applying noticeably greater pressure. On the 26th the main force of the 2/5th were held weather-bound at Port Moresby while Moten contemplated the prospect of an increasingly heavy assault by the enemy who, he now learned, were moving forward by cutting their way along a disused track—later to become known to the Australian troops as Jap Track—and closing on Wandumi. On the 27th Moten signalled New Guinea Force that he must risk leaving insufficient reserves in Wau if he was to meet the new threat. That day rather more than 200 troops were flown in and these too were quickly committed to action.

[1] Brig M. J. Moten, CBE, DSO, ED. CO 2/27 Bn 1940-41; comd 17 Bde 1942-45. Bank officer; of Woodville, SA; b. Hawker, SA, 3 Jul 1899. Died 14 Sep 1953.

The Japanese were now strongly engaging the Australians with heavy mortar and machine-gun fire but their attacks were withheld resolutely and in one sector they were counter-attacked with bayonets. Even so the enemy's pressure was too great and at points along the front the Australians were forced back. On the afternoon of the 28th the danger of Wau falling was extremely grave. Moten signalled most urgently for reinforcements



but the weather was in control of the situation and only four of 30 available transports got through. These carried the remainder of the 2/5th Battalion who were immediately sent into battle.

While adequate fresh troops waited idly beside the equally idle transport aircraft at Port Moresby, American fighter patrols kept close visual watch on the weather over Wau, only to report that the aerodrome and its approaches were closed tight by a dense barrier of cloud. Several transports had taken off, their pilots hopeful of finding some chink in an overcast that was like armour for the attacking enemy. The Japanese had now flowed around the Australian forward positions and were, by 7 p.m., reported to be "marching down the road to Wau", only two miles south-east of the aerodrome. Moten had withdrawn two companies that earlier had pushed out well beyond the enemy's forward positions. These troops, moving by night, had passed through Japanese-held territory and by 7 a.m. on the

29th were manning the aerodrome defences where, within about two hours, enemy small arms and mortar fire began to fall.

Less than an hour earlier the freakish weather had broken. Fighter pilots on reconnaissance over Wau, tensely aware of what this meant, signalled the transport base at Port Moresby. Almost immediately Dakotas, heavily laden with men and arms, began to roar off the runways. In rapid succession each of 57 transports swept down to land on Wau aerodrome, disembark their troops and with their engines still running, roar off again to make way for the next aircraft. They brought 814 troops to the aid of Moten's hard-pressed force.

Just before dawn on the 30th the Japanese made a determined effort to overrun the aerodrome, but the weather still favoured the Australians. At 9.15 a.m. two 25-pounder guns of 2/1st Field Regiment were flown in. Enemy fire was reaching the airfield as the aircraft taxied to a stop and rifle shots threatened the gunners as they unloaded and assembled their guns. Gun sites had already been selected and in two hours the artillery was in action. That afternoon between 300 and 400 Japanese emerged on to a road leading from Leahy's Farm. Almost instantly the gun crews had the range of this promising target and their shells were soon falling fairly among the enemy troops. Minutes later a formation of Beaufighters from No. 30 Squadron, who had answered an urgent call for air support, swept in low over the target to blast the enemy troops with 22,000 rounds of cannon and machine-gun fire.

One of the Beaufighters piloted by Sergeant Downing[2] with Sergeant Box[3] as observer, was directly over the target when a dump of high explosive blew up, devastating the surrounding area and killing a large number of Japanese. Downing's aircraft was caught in the blast and hit by debris. When the aircraft returned to Port Moresby the crew counted 58 holes in the starboard wing and many more in the fuselage. The squadron records claim that the explosion was caused by cannon fire from the Beaufighter. On the other hand the army's account of the incident is that "there was suddenly a major burst at the farm as a shell set off a supply of explosives. The ground rocked, a great cloud of billowing smoke rose, and many Japanese were killed."[4] To whom the credit for the explosion is due will always be in doubt, but the incident provided a vivid illustration of how closely the ground and air forces were linked in combat. If the claim for the artillery gunners was correct, then their shells must have been falling on the target when the Beaufighters struck.

Elsewhere the enemy was resisting fiercely, but the defenders received further reinforcements on the 31st, and that night it seemed to them that the crisis had passed. Next day 53 transports flew in, carrying 26,612 pounds weight of men and supplies. In 16 days the strength of Kanga Force had been built up from 403 officers and men to a total of 3,166

[2] F-Lt G. R. Downing, DFC, 408640; 30 Sqn. Clerk; of Melbourne; b. Melbourne, 13 Jan 1921.

[3] W-O D. K. Box, 8186; 30 Sqn. Contractor; of Mt Lawley, WA; b. Bunbury, WA, 12 Jan 1917. Died 12 Feb 1956.

[4] D. McCarthy, *South-West Pacific Area—First Year*, pp. 555-6.

(201 officers and 2,965 men) practically all of whom with their arms, equipment and supplies, had come by air.

The strain on the resources of the American No. 374 Troop Carrier Group was intense and the task of maintaining the over-worked Dakotas and other freight-carrying aircraft was an extreme test of endurance by both men and aircraft. By great good fortune the arrival in Australia in January of No. 317 Troop Carrier Group with 52 new Dakotas coincided with this most exacting period. The new aircraft were immediately transferred to the veteran group and No. 317 Group took over the assorted fleet that had been giving such splendid service.

In four days (29th January to 1st February) the transport aircraft had made 244 sorties into Wau. Credit for the efficiency of the whole air lift was shared notably by No. 4 (R.A.A.F.) Fighter Sector at Port Moresby, which accepted responsibility for the coordination of the operation. At its peak there were as many as 18 aircraft in a formation and at times three such formations got through in one morning. Each was covered by between 40 and 50 American Airacobra or Kittyhawk fighters with Lightnings flying as top cover. Fighter Sector's task in regulating air traffic of such density and in such difficult conditions was one of the most notable examples of efficient air traffic control in the Pacific war theatre.[5]

Air support by both No. 30 Squadron Beaufighters and the Bostons of No. 22 was continuous in this period. On the 31st four Beaufighters swept from Bakumbari to Salamaua, strafed Mubo and enemy posts at the mouth of the Waria River and reconnoitred the Ramu and Markham Valleys, while four Bostons bombed Mubo and surrounding enemy strongpoints, in which they started fires. They then strafed the enemy line of communication from Komiatum to Mubo. That afternoon they were again attacking the same targets and, having been airborne for three hours, landed at Dobodura to refuel. In January the squadron had been airborne for 204 hours and had dropped 30 tons of bombs and spent more than 83,000 rounds of ammunition in their support attacks. No. 30 Squadron, in the same period, had flown for 448 hours in 29 operations.

On the last day of January No. 4 Squadron assumed its own special role in the battle when four officers and 26 men, with their equipment, moved from their base at Berry near Port Moresby to Wau as an advance party. Next day two Wirraways were over the area photographing the enemy's positions. From then until the end of the battle, these aircraft were constantly engaged in reconnaissance and artillery spotting and in leading Beaufighters to specific targets, which they did by diving and then withdrawing.

To aid in target selection and identification Major Muir,[6] brigade major of the 17th Brigade, flew (on 2nd February) with the leader of a forma-

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[5] In this period flying escort to Wau became an exacting and all-absorbing task for the American fighter pilots, a fact that was amusingly illustrated in one group's roneoed news sheet which depicted an attractive young woman accompanied by two pilots; the caption was "Escort to Wow!"

[6] Lt-Col R. A. C. Muir. 7 Cav Regt; 25 Bde; BM 17 Bde 1941-43. Chartered accountant; of Brisbane; b. Perth, WA, 20 June 1910.

tion of Australian Bostons which, prevented by heavy cloud from attacking in the Crystal Creek area, effectively bombed enemy positions on the Buisaval Track.

In very marked contrast with the excellent coordination between the Allied ground and air operations in this battle, was the enemy's almost total disregard of their need for air support until, with the Australian troops now forcing their ground troops back, their opportunity to capture Wau was clearly lost. As a counter to Allied air operations the Japanese had only the weather, and when this turned against them a stream of Allied transports was able to turn the tide of the battle. Without any effort on the part of their own air units, their ground troops were being overwhelmed at a time when resolute air attacks on the Allied transports landing at Wau might well have been decisive. Belatedly, on 6th February, they made a highly spectacular air raid on Wau with nine bombers escorted by many fighters. There were four Allied Dakotas on the aerodrome and five more were in circuit awaiting their turn to land. Despite strong Allied fighter cover the enemy bombers came through unmolested and bombed the aerodrome accurately, one stick of bombs falling fairly along its centre. All the Dakotas but one escaped harm. A Wirraway, piloted by Flight Sergeant Rodbourn[7] with Sergeant Cole as observer, had just landed as the bombing began. The crew were only a few yards from their aircraft when, flinging themselves to the ground, they saw the Wirraway disintegrate as one bomb exploded alongside it. Cole received a minor wound. The raiders also scored a direct hit on the Air Cooperation Signals hut, killing several of the staff. For this degree of success the Japanese paid a big price. Allied fighters, whose number had been supplemented by three squadrons sent by Whitehead in ready response to a call for aid, shot down at least one of their bombers and 23 (if not more) of their fighters, while gunners of the American 156th Light Anti-Aircraft Battery, who had arrived on 1st February, shot down one bomber and two Zeros.

In providing the Allied air support for the Australian forces engaged at Wau, General Whitehead was striving his utmost. On 6th February Whitehead was informed that Kanga Force needed 23 transport planes every day, or 70 every three days, purely for maintenance and provision of reserves. This the air commander readily accepted. Lieut-General Mackay,[8] then temporarily relieving General Herring in command of New Guinea Force, wrote to General Blamey on 4th February:

> I have found Brigadier-General Whitehead of the U.S.A. Air Force extremely cooperative. In fact there is no question of asking for help—he takes the initiative.

By 9th February the Japanese opposition in the Wau Valley had been completely crushed. Ten days later New Guinea Force Headquarters issued an operations instruction providing for the future defence of the Bulolo

[7] F-O A. Rodbourn, 407806; 4 Sqn. EFTS instructor 1943-45. Clerk; of Walkerville, SA; b. Adelaide, 4 Apr 1915.

[8] Lt-Gen Sir Iven Mackay, KBE, CMG, DSO, VD. (1st AIF: CO 4 Bn 1916-17, 1 MG Bn 1918; comd 1 Inf Bde 1918-19.) GOC 6 Div 1940-41, Home Forces 1941-42, NGF 1943-44. High Commissioner for Australia in India 1944-48. Schoolmaster; of Sydney; b. Grafton, NSW, 7 Apr 1882.

Valley. This emphasised that "as our maintenance is at present entirely dependent on air transport the airfields at Wau and Bulolo and the road joining them must be retained. The airfield at Bulwa will be required for future use." Mackay was convinced that, though the Japanese had been beaten back with severe loss, they had not finally accepted defeat in the Wau and Bulolo Valleys, which were vital tactically if they were to continue to hold Lae and Salamaua.

Though they had been defeated in their purpose, the enemy's retirement was controlled. The troops who had made the thrust on Wau were fresh elements—men of the *51st Division*—who had been in combat at Shanghai and had come to Rabaul in December 1942 and January 1943 from French Indo-China. As the advance force of their division they had landed at Lae on 7th January. There had been a substantial movement of troops from Lae to Salamaua where the garrison had been increased to almost 4,000, the total for the two bases being about 6,500.

Though the battle for Wau had ended and much of the strain had been lifted, the momentum of close air support for the army was being maintained at much the same intensity. Wherever targets offered—and there was no lack of them—the Australian Bostons and Beaufighters were fully engaged as were the American Mitchells, Bostons and Marauders. On 21st February, for example, seven R.A.A.F. Bostons attacked a group of villages (Waipali, Lalibu and Buibaining) reported to be occupied by a force of several hundred Japanese. Bombing from low altitude and then strafing from just above the trees, the aircraft made such havoc that there was little or no opposition when the troops moved in. One report claimed that apart from such casualties as the infantry may have inflicted, they found 250 Japanese dead in the area.

After the Bostons had swept enemy positions from the mouth of the Waria River from Sappa to Kobo in three strafing runs on the 24th, a report from a Papuan Infantry Battalion stated simply, "Many Japanese killed in air raid." These operations were the measure of the proper application of air attack to ground action that Blamey and Kenney had now achieved.

No survey of the task that lay ahead of MacArthur's forces could miss the significance of the success of Halsey's forces in the Solomons. Both strategically and tactically it was reasonable to expect that the Japanese answer to the frustration experienced there would be an increasingly heavy concentration of their forces in New Guinea.

Mackay's Intelligence officers had submitted reports to him from which he had compiled a despatch to Blamey on 13th February in which he emphasised this possibility and gave estimates of the enemy strength in New Guinea as 8,000 at Lae and Salamaua (an over-estimate probably of about 1,500), 5,000 at Madang and 9,000 at Wewak, with "another division arriving". Intelligence reports received by S.W.P.A. Headquarters also told of increasing Japanese activity in airfield development along the

north coast of New Guinea from as far west as Babo eastwards to Lae. This included a 1,400-yards runway on Wakde Island, one of 1,300 yards on a site inland from Hollandia Bay, a large airfield at Wewak which already had 77 dispersal bays, and road construction at both Madang and Alexishafen. There were, too, reports of comparable activity on Cape Gloucester.

Rabaul remained, of course, a South-West Pacific Area responsibility and, while the long-range reconnaissance and heavy bombers of the S.O.P.A.C. air units could now well care for the whole of the Solomons, Buin and Buka were within more convenient range of S.W.P.A. bases.

Late in January, Kenney—"after adding up all the columns of figures showing what I had to fight with"—had written to General Arnold pointing out that in the last three months he had received from the United States a total of 89 aircraft. In that period his losses "from combat, accidents, wear and tear and all other causes combined" totalled 146 and his total strength was 537 of which about 200 were constantly under repair.[9] The greatest weakness was in heavy bomber strength and, with Rabaul more conspicuous than ever among the air targets, this was worrying. In January the base had been attacked by the Fifth Air Force 13 times. These raids had been made chiefly at night with a maximum force of 12 heavy bombers. More experienced, and therefore more confident, the crews were now bombing from medium altitude (5,000 to 9,000 feet) and at times from as low as 250 feet. A notable variation was a daylight attack on 5th January when a force of Flying Fortresses dropped 40 500-lb and 24 1,000-lb bombs on shipping in Simpson Harbour. Two of the aircraft were lost through intense anti-aircraft fire and fighter interception. In one of these aircraft Brigadier-General Walker, the gallant and able commander of 5th Bomber Command, lost his life. The crews returning from this raid, which was made from 8,500 feet, claimed to have either sunk or left burning nine enemy ships.[1]

The much over-worked heavy bombers now required considerable nursing. No. 43 Group, which had been operating in the area for six months, had a strength of 55 Flying Fortresses, about 20 per cent of which were regularly under overhaul. Only about 50 per cent of the remainder could be counted on as available daily for combat missions. Even then about 25 per cent of this final total was needed for regular reconnaissance, which reduced the group's striking strength to only 12 or 14 aircraft for regular attack operations. However, the striking strength could apparently be substantially increased by temporarily suspending Flying Fortress reconnaissance and, after adequate warning and by making a special effort, releasing more aircraft from the overhaul and maintenance shops. There was proof of this on the night of 14th-15th February when 32 Flying Fortresses and four Liberators—the largest bomber force yet used—dropped 50 tons

[9] *General Kenney Reports*, pp. 185-6.

[1] A subsequent survey by the Joint Army-Navy Assessment Committee reported that only two Japanese ships were sunk at Rabaul in January, one of them, the *Keifuku Maru* (5,833 tons), on the 5th.

of demolition bombs and 4,000 incendiary bombs on Rabaul, starting widespread fires in the town.[2]

As mentioned No. 90 Group, with Liberators, had not been assigned any important share of the burden until January. Of the 60 aircraft so far delivered to it not more than 15 could be sent on strike at one time. The Liberator at this time was noticeably weak in its forward fire power, a fact Japanese fighter pilots were quick to detect. Kenney's engineers adapted a tail turret with two power-operated .50-calibre guns to replace the four-gun arrangement in the nose, in which only one gun could be fired at a time.[3]

There was now some relief for the 5th Bomber Command by reason of its ability to base some of the heavy bombers at Port Moresby and Milne Bay. This was only one indication of recent airfield development by both American and Australian construction units. Round Port Moresby there were now six airfields with taxiways and dispersal areas, and at Milne Bay there were two, and Dobodura also was now being developed as a major operating base.[4] By this time transport aircraft had flown 150 tons of steel matting to Dobodura so that a fighter runway could be laid down.

Aircraft warning systems had also been installed. An American unit had been operating from Port Moresby since September and radar units had been placed at Milne Bay, at Tufi Point, and on Goodenough and Normanby Islands.

In fighter strength Kenney had nine squadrons, with a total of 330 aircraft operating in New Guinea. Most important in that total were 80 Lightnings. Among the remainder were 74 well-worn Airacobras.

Such was now the Japanese respect for the Allied fighter strength and capacity that severe air raids were exceptional in January and February. One notable exception had been an assault on Milne Bay on 17th January by more than 20 bombers escorted by fighters in about equal strength. The target was Turnbull airfield on which the raiders dropped more than 200 fragmentation bombs. Surprisingly, there were no casualties, but about six grounded aircraft were completely destroyed and a large number damaged. No. 6 Squadron suffered severely. Though only one of its Hudsons was completely demolished, six others were seriously damaged and not one of its aircraft escaped some degree of harm. Motor transport and fuel dumps were also destroyed. There is no record of Allied fighter interception.[5]

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[2] Kenney, pp. 191-2.

[3] Kenney ordered 35 of these turrets from the United States and asked that all future aircraft of this type should be so fitted. The turrets did not arrive until March and in May he was asking for 36 more for use on recently delivered aircraft. Belly and tail guns were also added to the Liberator's armament.

[4] The six airfields near Port Moresby were Jackson (formerly Seven Mile), 5½ miles north-east of the town, Ward's, 4 miles to the north-east, Kila (formerly Three Mile), Waigani (later to be known as Durand), 8½ miles to the north-north-east, Laloki (later Schwimmer), 9 miles to the north-east, and Bomana (later Berry) in the same area. The two at Milne Bay were Gurney and Turnbull (a third was planned but not developed).

[5] The records do not agree about the precise number of Allied aircraft destroyed. Apart from No. 6 Squadron's losses, it appears that two Flying Fortresses, one Liberator and two Airacobras were demolished on the ground.

There was a raid by three aircraft on the 21st and several more raids in February, the heaviest of which was made by at least six bombers on the night of the 23rd-24th. Turnbull Strip was straddled with 18 bombs and three aircraft were slightly damaged. Seven bombs dropped near by killed one and wounded five.

In February No. 75 Squadron, now commanded by Squadron Leader Arthur,[6] returned to Milne Bay, after refitting in Australia. It was joined there by No. 77 (Squadron Leader Cresswell) from Darwin.

In medium and light bomber strength (the effective part of which was at Port Moresby) Kenney's force appeared better on paper than it was in fact. Of six squadrons of medium bombers the two (in No. 38 Group) equipped with Mitchells were practically at full strength, but the four Marauder squadrons (in No. 22 Group) had been withdrawn to the mainland to recuperate from the strain of a long period of operations. Though classed as light bomber units Nos. 13 and 90 Squadrons (No. 3 Group) were still equipped with Mitchells, while Nos. 8 and 89 of the same group had Bostons, though these had been so reduced as to have become virtually a single squadron. Kenney was allocating his force on a rotation basis with one-third on combat operations, one-third on alert, and one-third resting or training.

Always aggressive and hard-hitting in his attitude to his task, the air commander was deeply interested in any development that would give him greater striking power. And, if there was one aggressive purpose more than another occupying his mind at this stage, it concerned ways and means of sinking Japanese ships. Every interpretation of enemy intentions pointed to the likelihood of that capacity being tested under extreme pressure, perhaps in the very near future. Kenney needed no prompting to appreciate that the Japanese would almost certainly make their next aggressive thrust in the form of a large-scale seaborne reinforcement operation from Rabaul, probably into the Huon Gulf; that it would be his responsibility to stop that force before it reached New Guinea shores; and that, if he failed, the Allied Land Forces would face a far more difficult task.

In view of this very critical prospect the armament of the light and medium bombers and low-attack aircraft and the tactics to be applied were absorbing most of the attention of 5th Bomber Command, now commanded by Brigadier-General Howard Ramey, who had arrived on 18th January to fill the vacancy caused by Walker's death.

The most recent type of Mitchell to arrive in the theatre (the C-1) had been made a particular subject for armament experiment. The lower turret and tail gun on the standard model had been eliminated and the forward-firing guns supplemented to provide four in the nose and four more mounted on each side in "blisters". An upper turret carried two more guns, and the bomb rack was adapted to carry 60 small fragmentation bombs for low-level attack, in addition to six 100-lb demolition bombs. In the result the aircraft was slower and less manoeuvrable, but, having increased

[6] Gp Capt W. S. Arthur, DSO, DFC, 565. 3 Sqn; comd 75 Sqn 1943, 2 OTU 1944, 81 Wing 1944-45, 78 Wing 1945. Student; of Yelarbon, Qld; b. Sydney, 7 Dec 1919.

range and much greater fire-power, it was the type of attack aircraft Kenney most needed.[7]

Meanwhile there had been great activity over the old wreck outside Port Moresby Harbour where seemingly countless practice bomb runs were being made with low-attack bombers, particularly those of No. 90 Squadron.

Skip-bombing, the ricochet method of beam-on attack on ships which had so fascinated Kenney on his way to Australia and on which two of his bomber squadron commanders—Majors William Benn and Ed Larner—had spent much time experimenting, was still being practised.[8] There was, however, a growing preference for direct attack using a reference point on the nose of the aircraft to serve as a bombsight. The bombs used had a modified delayed-action fuse, the effectiveness of which was proved rather too realistically when two of the aircraft in these exercises were damaged by flying debris. On two occasions in February the Mitchell crews had hopes for real "practice" when they went out on shipping attack missions but in neither instance could the enemy vessels be found.

Further anticipation of the nature of the task the Allied squadrons might be expected to undertake was demonstrated late in February when, co-ordinating with No. 30 Squadron's Beaufighters and the American Bostons, the Mitchell crews engaged in attack rehearsals that were most assiduously performed.

Allied Intelligence reports, well respected for their accuracy, had given warning on 19th February 1943 that further enemy troop movements to the Lae area could be expected. Nine days later further reports from the same source predicted that the Japanese would attempt a landing at Lae on 5th March and at Madang, probably on the 12th. Bomber Command thereafter began planning to meet such a threat on three different assumptions: (1) Lae would be the direct destination of the enemy force which must therefore come within the striking range of virtually the whole of the Allied Air Forces based in New Guinea; (2) the convoy might divide (probably to the north of Dampier Strait), one force heading for Madang and the other for Lae; and (3) Madang might be the destination of the entire force. If the enemy chose the first of these courses the plan was for a coordinated attack with all strength and regulated initially only by the range of the aircraft to be employed at various stages. If the second course was chosen the heavy bombers would accept responsibility for the Madang-bound force, while medium bombers and light attack aircraft would assail the Lae-bound convoy as the ships came within their range. For the third course the assault plan concerned heavy bombers only, while other units would attack and try to neutralise all enemy airfields within their range.

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[7] By April 1943 about 30 Mitchells had been so modified. A change in the standard 3-man crew was also made, the bombardier being replaced by a co-pilot.

[8] Though there are claims, at least by implication that "skip-bombing" was initiated in the South-West Pacific theatre as a result of Kenney's interest, the method had in fact been devised and used by the R.A.F. in European waters. General Arnold, in *Global War* (pp. 230-1), notes this and records that as a result he himself stimulated U.S.A.A.F. experiments in the technique.



(R.A.A.F.)

A surprise strafing attack by F-Lt R. F. Uren and F-O R. H. Roe on Malahang airfield, near Lae, on 4th March 1943 in which six Zeros and one refuelling tanker were destroyed. The fire power of the Beaufighters from 20-mm cannon and six .303-inch machine-guns is illustrated by the fact that only a few seconds had elapsed between the taking of the upper photograph in which one of the Beaufighters is beginning a diving attack and of the one below showing three Zeros in flames.



(*R.A.A.F.*)

Ward's Field, Port Moresby, on 3rd April 1943, showing the extensive development of the base and dispersed Liberator bombers and Douglas transport aircraft. The staggered and curved lines of the built-up dispersal pens reduced the risk from strafing.



(*Australian War Memorial*)

Groups of parked Kittyhawks at Milne Bay seen from the nose of a Beaufort bomber in April 1943.

The Allied Air Forces as a whole had available for combat on 1st March, 154 fighters, 34 light bombers, 41 medium bombers and 39 heavy bombers. These totals excluded all aircraft assigned for escort and reconnaissance. Alerted for action, Whitehead had under his immediate command, 95 fighters, 49 medium and light bombers, and 37 heavy bombers.

Between 27th February and 1st March stormy weather rolled across the Solomon and Bismarck Seas, enshrouding the coasts of New Britain and making the task of the now tensely watchful reconnaissance crews more than difficult. But on the 1st the crews of two Liberators on patrol off New Britain reported that the weather was clearing. A third Liberator was dispatched almost immediately to strengthen the reconnaissance and the crew of this aircraft at 3 p.m. reported the first sighting of the expected convoy, described in their signal as 14 ships, escorted by Zero fighters, on a westerly course about 40 miles north-west of Ubili.

The crew of another Liberator, sent off to shadow the enemy ships, reported that the weather was again closing in and a force of eight Flying Fortresses, over the area in the late afternoon, failed to find the convoy.

At dawn on 2nd March six R.A.A.F. Bostons swept low over Lae aerodrome to bomb the runway and dispersal areas, a successful operation that temporarily checked the enemy's use of the base for air support. Meanwhile, searching Liberator crews were flying through poor weather until, about 10 a.m., one crew again found the convoy, reporting it to consist of a light cruiser, five destroyers and eight transports (the "cruiser" proving to be a large destroyer). A formation of 8 Flying Fortresses, followed an hour later by a second of 20, took off to attack. Finding the enemy ships without difficulty, the first formation attacked with 1,000-lb demolition bombs, returning to claim two of the transports as sunk, one of them "breaking in half and sinking in two minutes". The second formation then struck. These crews returned to report, with understandable excitement, that they had left one transport "burning and exploding", another "burning amidships". A third was "seen to explode" and a fourth was "in a sinking condition". Probably there was some exaggeration in these claims, but it was clear that the initial attacks had met with some success.

As the main convoy, holding course, approached the entrance to Vitiaz Strait shortly before dark, they were set upon by 11 more Fortresses whose crews claimed two direct hits and one vessel sinking. The first American formations were without fighter cover, the Lightnings having failed to make rendezvous, but there were no casualties among the bomber crews; enemy fighters, one of which was shot down, were not very aggressive. Doubt about the exact composition of the convoy remained. A Flying Fortress crew, shadowing until darkness, thought that two unidentified ships had joined the convoy in mid-afternoon and that about one hour later two "possible light cruisers" had left it.

That night R.A.A.F. Catalina crews relieved the American crews and kept watch in fitful moonlight, occasionally dropping bombs to add to the anxiety of the Japanese. A Flying Fortress relieved them early next morn-

ing. During the night a lone Beaufort from Milne Bay, piloted by Squadron Leader Smibert,[9] sought the enemy ships without success.

It was now beyond doubt that, of the three possible courses the enemy might follow, their intention was to accept the boldest and most dangerous; the convoy had turned south-east into Vitiaz Strait and was headed directly for Lae. If the Japanese were anxious up to this stage of their progress—the passage through Vitiaz Strait which was accomplished in darkness—they had infinitely greater reason for anxiety as they rounded the Huon Peninsula on the morning of the 3rd. They had now come within range of the Allied attack squadrons which had been schooled for weeks in anticipation of the very assault the convoy must now face.

Allied reconnaissance reports varied considerably, but the best assessment of them possible suggested that overnight the convoy had been joined by a supplementary force of perhaps as many as seven vessels.

At 4 a.m. eight Beauforts from No. 100 Squadron, armed with torpedoes, took off from Milne Bay and flew northward through a heavy weather front in search of the enemy force. Only two of these aircraft got through. One, piloted by Pilot Officer Waters,[1] made an attack run on a destroyer (mistaken by the crew for a light cruiser). The torpedo was launched but there was no hit. The second Beaufort, captained by Flying Officer Hall,[2] selected a transport of about 8,000 tons but the torpedo hung up in the aircraft's bay and in desperation Hall dived and made a strafing run over the ship.

The weather, which so often had been an ally to such aggressive seaborne expeditions as the Japanese were undertaking, now favoured their opponents. That morning a clear sky over Port Moresby resounded with the roar of more than 90 aircraft taking off to keep rendezvous over Cape Ward Hunt. The plan for the attack was being followed precisely. Thirteen Beaufighters, their four cannon in the nose and six machine-guns in the wings fully tested and checked, took off to make formation and meet, about 9.30 a.m., two formations of Mitchells, one of 13 and the other of 12 of the latest C-1 type from No. 9 Squadron. Higher overhead were 13 Flying Fortresses, moving out to open the attack with, above them again, 28 Lightning fighters on their way to meet the enemy's fighter cover. While these aircraft were assembling Bostons from No. 22 Squadron were very effectively repeating their neutralising attack on Lae aerodrome.

In the beginning, with the enemy convoy steaming resolutely for Lae, the Flying Fortresses made their assault, bombing from medium altitude (about 7,000 feet) and attracting the attention of a large formation of enemy fighters.

The sky was suddenly filled with combat. As the Zeros dived on the Fortresses the Lightnings dived on them. One of the heavy bombers, shattered by cannon fire from attacking Zeros, dived out of control, its crew of

[9] W Cdr J. A. Smibert, 250276. 7 Sqn; comd 100 Sqn 1943. Research physicist; of Toorak, Vic; b. Elsternwick, Vic, 4 Jul 1917.

[1] F-Lt K. N. Waters, DFC, 408192. 100 and 8 Sqns; Instructor 6 OTU 1943-44. Foreman; of Launceston, Tas; b. Lefroy, Tas, 26 Aug 1915.

[2] F-Lt L. W. Hall, DFC, 406717. 6, 13, 100 and 2 Sqns. Clerk; of Perth, WA; b. Subiaco, WA, 21 May 1919.

seven baling out before their aircraft disintegrated. As they parachuted down, Zero pilots strafed them and all died either from enemy gunfire or in the sea below where the battle was now at its height. Three Lightning pilots, diving to their aid through heavy anti-aircraft fire from the ships, were also shot down, but their fellow pilots revenged them to the extent of about 15 Zeros destroyed in combat, the Fortress gunners adding another five to that total.

The Fortresses completed their bombing runs and claimed five direct hits. They were credited with the sinking of one ship and probably another, but their own combat reports, expressively honest, included the comments: "Ships left burning—exact number of hits unknown—at least four near misses observed"; "Due to interception results were not observed."[3]

This bombing had scarcely ended when the Beaufighters led in the low-level attackers. Some of the aircrew gained the impression that the Beaufighters' approach was mistaken for an impending torpedo attack as some of the ships altered course to meet the aircraft bows on. This had the effect of improving the targets for the Beaufighters which, changing course, were thus able to make beam-on strafing runs over more than one ship at a time made at little more than mast height. The attack had its intended effect of silencing many of the anti-aircraft gun crews, among whom the casualties, as torn and burning superstructure indicated, must have been considerable; and so the way was prepared for the most devastating attacks of all, the assault by the American Mitchells—a standard medium-altitude bombing attack by the first formation, followed by the Mitchell C-1s at 500 feet with each pilot selecting his own target. With their heavy fire power from their nose guns shattering those of the enemy's gun crews who had not been suppressed by the Beaufighters' attack, their bombs tore into the ships' hulls. Seventeen direct hits were claimed in this onslaught. Soon ships were listing or sinking, their superstructure smashed and blazing, and great clouds of dense black smoke rising into a sky where aircraft circled and dived over the confusion they had wrought among what, less than an hour earlier, had been an impressively orderly convoy.

As the aerial battle continued one Beaufighter pilot, with a burst of cannon fire, rid a Mitchell crew of a Zero that was fiercely attacking them. Two Zeros dived upon another Beaufighter, setting its port engine on fire and wounding both the pilot and observer—Sergeants Downing and Box —who, in the same aircraft, had been caught in the explosion at Leahy's Farm in the battle for Wau. Downing, with a shell splinter in his left shoulder, was now forced to withdraw. Though able to use only one arm he flew to Popondetta and landed safely.

With their bombs and ammunition spent, the attack aircraft withdrew, but only to rearm for renewed assaults. That afternoon the Allied aircraft returned, though deteriorating weather prevented a formation of Bostons and six of a formation of 29 Mitchells from reaching the target area. Even

[3] Craven and Cate, *The Army Air Forces in World War II*, Vol IV, p. 144*n*.

so the vigour of the attack was maintained. Direct hits were claimed by Fortress crews and the Mitchell crews returned after their second assault to report "four hits on a destroyer, four on a cruiser and one each on two transports—all left in a sinking condition". Fifteen more Mitchells then swept in to bomb, sometimes from as low as 200 feet. Their crews later claimed ten direct hits. Five of No. 22 Squadron's Bostons, led by Squadron Leader Learmonth,[4] followed closely into the attack, while Flying Fortresses were simultaneously bombing from medium altitude. The Australian crews claimed two direct hits and several near misses and were credited with the sinking of one more enemy ship. The Bostons were repeatedly attacked by Zeros, one of them by four at one time, but the pilot, Flying Officer Craig,[5] turned boldly into them with his guns firing and the enemy pilots broke away.

As a postscript to the battle proper, five American motor torpedo boats sortied from their base at Tufi on the night of 3rd-4th March to search for quarry. They found one crippled ship and sent it to the bottom of the darkened sea. That morning the bombers, continuing the hunt, sank a solitary and badly damaged destroyer—the last that was seen of the great Japanese Lae convoy. But still the devastating task of the air attackers was not over and still there was urgent need to deny the enemy air units an adjacent base. Thus, on the morning of the 4th, eleven Beaufighters cooperated with American Bostons in a heavy raid on Malahang airfield, adjacent to Lae, where they were met by heavy anti-aircraft fire and 12 enemy fighters. Engaged by Lightnings covering the attack, the Zero pilots refrained from serious interception. After the attackers had drenched the target area with gunfire and bombs, two Beaufighters, one piloted by Flying Officer Roe and the other by Flight Lieutenant Uren,[6] returned to attack camouflaged grounded fighter aircraft they had detected on their initial runs. As they withdrew six of these aircraft and a refuelling waggon were in flames. The port engine of Roe's aircraft had been hit by an anti-aircraft shell but he was able to fly it back to base, while Uren, with his aircraft severely damaged by enemy ground fire, made a crash landing at Dobodura in which the Beaufighter was destroyed though the crew escaped unharmed.

On the 5th, and for several days thereafter, there was the terrible yet essential finale: Beaufighters, Bostons and Mitchells swept to and fro over the waters of the Huon Gulf seeking out and destroying barges and rafts crowded with survivors from the sunken enemy ships. It was grim and bloody work for which the crews had little stomach. Some of the men in Beaufighter crews confessed to experiencing acute nausea. The realistic and grimly objective comment from one of their flight leaders was that every one of these troops was an enemy pledged to kill his opponents

[4] W Cdr C. C. Learmonth, DFC, 385. Comd 22 Sqn 1943, 14 Sqn 1943-44. Regular air force offr; of Tyrendarra, Vic; b. Portland, Vic, 2 May 1917. Killed in action 6 Jan 1944.

[5] F-Lt H. B. Craig, DFC, 402228. 1451, 1457 Flts RAF and 22 Sqn. Jackeroo; of Sydney; b. Sydney, 3 Oct 1914.

[6] Sqn Ldr R. F. Uren, DFC, 260535. 6, 22 and 30 Sqns. Aircraft engine mechanic; of Kogarah, NSW; b. 26 Apr 1920.

and so every one the Beaufighters' guns prevented from getting ashore was "one Jap" less for the army to kill.

At the Allied headquarters there was very natural elation over what General MacArthur was later to describe as "the decisive aerial engagement" of the war in the South-West Pacific.[7] At advance headquarters of the Fifth Air Force, Intelligence officers were absorbed in the difficult task of comparing and evaluating the reconnaissance sighting reports, combat reports and aircrew interrogations, which had been streaming in since the battle began. Despite careful assessment it was impossible then to produce precise statistics of the enemy's losses. On the other hand it was clear that, by comparison, those of the Allied air units had been infinitesimal —13 aircrew members killed—10 in combat and 3 in an accident—and 8 wounded; 6 aircraft destroyed—one Flying Fortress and three Lightnings in combat and two, one Mitchell and one Beaufighter, by accident. There was no certainty about the precise strength of the Lae convoy until some time after the battle. Apart from conflicting counts by a large number of reporting aircrew, there was the puzzling inference that a supplementary force of seven vessels had joined the one orginally sighted. By adding these to the number of ships reported in the first sighting (14) and a "small transport" reported sunk by a reconnaissance plane in Wide Bay, about 50 miles south of Rabaul, the total number of ships was brought to 22. Not one report was received of any ship in the convoy escaping so that, on the evidence then available, all 22 were presumed to have been sunk.

On 7th March General MacArthur issued a communiqué which later aroused much discussion and some controversy. This gave the composition of the enemy convoy as 12 transports, 3 cruisers, and 7 destroyers—22 ships—which, it was claimed, had been totally destroyed together with 12,762 troops, 59 aircraft and large quantities of equipment and supplies.

Painstaking research using captured enemy documents, the interrogations of prisoners and all available relevant Allied documents, undertaken at Army Air Force Headquarters, Washington, several months after the battle, seemed to leave no doubt that there was no supplementary convoy, that no additional vessels joined the convoy en route, and that the total number of ships at no time exceeded 16—8 destroyers and 8 transports. A report on the action, issued by Advance Headquarters Fifth Air Force, a month after the battle, asserted that "only 12 or 13 ships were actually sighted sinking or in obviously desperate condition".[8] Final adjudication, after all the evidence had been sifted, later established that 16 ships set out for Lae—eight destroyers (no cruisers were employed) and eight transports, one of which was a naval special service ship serving as a transport. Four of the eight destroyers did in fact escape from the Allied bombers. All eight of the transports were sunk making the total ships lost 12.

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[7] Interview with General MacArthur, *Washington Post*, 4 Sep 1945, p. 2.

[8] GHQ, SWPA, when these conclusions were submitted declined to accept them, holding to the claims of the original communiqué. MacArthur in fact, in a message to Washington on 7 Sep 1943, even went so far as to suggest that action might be taken against those responsible for calling the claims made in the communiqué into question.

On board the transports there were about 6,000 army troops and 400 marines who, with the complements of the ships themselves—destroyer crews 1,650, army transport crews 440, naval transport crew 250—made up a total roll-call of 8,740 officers and men. Of these about 2,890 were drowned or killed—in contrast with the claim by G.H.Q. that the death roll was 12,762. The losses were divided thus: army approximately 2,300, marines 150, destroyer crews 250, army transport crews 140, naval transport crew 50. Of those rescued, 3,800 were saved by the surviving destroyers (whose crews numbering 825 must be included in the total saved), 275 by submarine, 850 put ashore at Lae by destroyers and 21 reported to have swum ashore. The total so saved adds up to 5,771, leaving 79 unaccounted for.[9]

Post-war study of Japanese documents and interrogation of Japanese participants show that assembled in Simpson Harbour, Rabaul, on the afternoon of 28th February under the command of Rear-Admiral Kimura, commander of the *3rd Destroyer Flotilla,* were the escort of eight destroyers—*Shirayuki* (wearing Kimura's flag), *Arashio, Asashio, Tokitsukaze, Yukikaze, Uranami, Shikinami* and *Asagumo*; and seven army transports—*Aiyo Maru* (2,750 tons), *Kembu Maru* (700 tons), *Kyokusei Maru* (5,500 tons), *Oigawa Maru* (6,500 tons), *Shinai Maru* (3,800 tons), *Taimei Maru* (3,750 tons) and *Teiyo Maru* (6,870 tons). The naval special service ship *Nojima* (8,251 tons) made the convoy's eighth transport. These eight ships between them carried about 6,000 troops, the main body of the *51st Division,* and the *23rd Anti-Aircraft Defence Unit.*

Kimura apparently had no illusions about the gravity of his task and, accepting that the convoy could not escape detection by Allied aircraft, decided to take the shortest route to Lae so that his obviously slow convoy could reach its destination and return to Rabaul in the shortest possible time. This route would lead along the north coast of New Britain to a point north of Cape Gloucester, then west by north to a point north-east of Long Island, where it would turn south by east through Vitiaz Strait, lead past Cape Cretin and then south into the Huon Gulf. Fighter cover would be provided for the convoy by the *253rd Air Group.*

At midnight on 28th February the convoy moved out from Rabaul. Its speed was seven knots. The voyage was uneventful until, at 4 p.m. on 1st March when the ships were 45 miles west-south-west of Cape Lambert, an Allied aircraft was sighted. That night another Allied aircraft could be heard overhead and flares dropped from it were seen. At 6.20 a.m. on the 2nd an Allied aircraft was again seen and an hour and a half later 10 Flying Fortresses appeared flying at 9,000 feet to make the first bombing attack. The convoy's air escort of 33 fighters intercepted these bombers and their fighter escort. Three Japanese fighters were shot down. The transport *Kyokusei Maru* was hit and fatally damaged. At 9.22 a.m. she sank, but 850 troops who were on board were first transferred to the destroyers *Asagumo* and *Yukikaze,* which then made all speed direct for Lae where they landed the troops at midnight and returned to rejoin the convoy next morning without having been detected. Meanwhile the convoy had moved westward and from 2.30 p.m. to 4 p.m. had circled to the north-east of Long Island (presumably to give the two absent destroyers a margin of time for rejoining) and then turned south. A quarter of an hour after resuming course the ships were again attacked, this time by eight Flying Fortresses. The accounts of the action make no reference to any bomb hits, nor do they do so when recording an attack on the destroyer escort that night.

[9] Sources for these statistics include Bismarck Sea narrative compiled from various Japanese sources by HQ, FEAF; interrogation of Lt-Cdr Handa, Staff Officer 3, Destroyer Squadron: *Great East Asia War Summary,* compiled for GHQ (US Army) Tokyo, 14 Apr 1950, and *Major New Guinea Operations,* 13 Apr 1950.

A few minutes before 8 a.m. on the 3rd March, when the convoy was about 30 miles south-east of Finschhafen, the main Allied attack began. About 30 Flying Fortresses and 30 Mitchells came in from the south, then about 20 Bostons at low level with 20 unidentified aircraft above the Fortresses and 30 to 40 fighters at high level.[1] The flagship *Shirayuki* was the first vessel hit and Admiral Kimura was wounded. The vessel was attacked "in waves of three planes which came in at extremely low level . . . in strafing and bombing attacks. Most personnel on the bridge were killed or wounded. A bomb hit the after turret . . . a fire started, a powder magazine exploded, and the stern section broke off and the ship was flooded and sank."[2] An hour and a half later and after her crew had been transferred to *Shikinami,* she was scuttled.

About this time a second destroyer, *Arashio,* also hit, collided with *Nojima* which was disabled, and abandoned. Later this transport was sunk by bombs. *Arashio,* in the meanwhile, was listing 30 degrees and later she also was abandoned. Early in the engagement another destroyer, *Tokitsukaze,* was seriously damaged. She sank later but her crew by then had been trans-shipped to *Yukikaze.*

All seven army transports had now been badly hit and most of them were on fire. "One or two" blew up and all eventually sank. At 4.50 p.m. on the 3rd Kimura decided to withdraw through Dampier Strait, his ship, *Shikinami,* having been fully engaged in rescue work as had the three other surviving destroyers, *Uranami, Yukikaze* and *Asagumo,* two of which also withdrew while a third remained for a time, presumably to rescue survivors from *Nojima,* before also withdrawing. All four surviving destroyers made rendezvous to the east of Long Island with the destroyer *Hatsuyuki* and other vessels, which had been summoned from Rabaul (or Kavieng; the reports are not clear on this point) to refuel the destroyers with the convoy and take off 2,700 survivors and transport them to Rabaul. Early on the morning of the 4th there were between 20 and 30 lifeboats containing about 1,000 men adrift over a wide area. Two days later the submarines *I-17* and *I-26* rescued 170 of these survivors. On the 8th *I-26* picked up 54 men from an islet to the west of Goodenough Island and on the 11th put them ashore at Lae.

Dobodura, which had served so well as a forward base in the Gona-Buna-Sanananda campaign and had become increasingly important in forward planning for future air and land operations, had one particularly serious drawback—poor communications. The Owen Stanleys combined with the tropical weather to make radio reception unreliable. Australian and American signallers with a large team of native carriers and supplied for the most part by air dropping tackled the difficult task of laying a land telephone line from Port Moresby along the Kokoda Track. With this additional link, which was completed in about five weeks, Kenney considered it prudent to set up a forward air headquarters at Dobodura. Established in March, with operational control over the Allied air units on the north coast, this headquarters was named initially the Buna Air Task Force. Even with the new telephone line—itself subject to the effects of storm and damage from other causes—communications between Advon Fifth Air Force and the new headquarters were far from good, but the commander of the task force could, when need be, accept responsibility for combat operations. Kenney replied to criticism of this development from Washington, insisting that his new headquarters were well justified, but the

[1] The inaccuracies in this report as to the numbers and types of Allied aircraft in the attack are understandable.

[2] Account by Lt-Cdr Handa who was on board *Shirayuki.*

War Department gave no official authority for its formation and it therefore had no accepted establishment; its officers, from the commander, Colonel Frederick H. Smith Jr, down, retaining nominally the posts to which they had been designated originally. Smith, for example, remained listed as deputy Chief of Staff, Fifth Air Force. At this stage the task force consisted mainly of a group of American fighter squadrons.[3]

In preparation for the next Allied forward movement in New Guinea, American ground troops moved up the coast to the mouth of the Mambare River in the middle of March. Finding that the Japanese had withdrawn to the north of Morobe an American Army force (MacKechnie Force) formed chiefly from the I Battalion, 162nd Regiment, moved on 31st March to the mouth of the Waria River and to Dona airstrip, which provided an emergency landing point that could also be used by liaison aircraft. On 3rd April MacKechnie Force landed at Morobe and reported, three days later, that the nearest enemy patrols encountered were ten miles farther to the north-west.

Though Kenney's air forces now dominated the New Guinea scene, the Japanese air units were still effective. On 9th March the commander of the enemy's army and navy air units at Rabaul, Admiral Kusaka, began a spirited effort to regain control. On that day Wau was attacked by about 26 bombers escorted by more than 20 fighters. Little was achieved in this raid but on the 11th a comparable force struck at Dobodura. Two American ground staff were killed and three aircraft were destroyed on the ground. American fighter pilots claimed to have destroyed at least nine of the enemy's aircraft for the loss of one Kittyhawk. On the night of the 14th 15 Japanese bombers raided the American base at Oro Bay and caused some damage. Again, on the 17th, 18 bombers with the unusually heavy escort of 32 fighters struck at Porlock Harbour, though without much effect. This spate of air attacks reached its peak on the 28th when, after the local fighter sector had given a raid warning prompted by a particularly large radar plot, about 40 enemy bombers with a large fighter escort swept in over Oro Bay, smashed a newly built wharf, sank two small ships and killed a number of men. American fighter pilots intercepted and claimed 13 enemy aircraft. The advanced New Guinea bases were then given a respite while Kusaka directed his strength against targets in the Solomons.

For the Australian squadrons in New Guinea the days following the end of the Bismarck Sea battle were days of constant pressure on the enemy's remaining bases and lines of communication. In these attacks there was heavy concentration on Lae and Salamaua which were repeatedly bombed by the Bostons of No. 22 Squadron and strafed by the Beaufighters of No. 30 Squadron. In this period the isthmus of Salamaua was attacked by the Bostons with particular severity and from very low level. During March No. 22 Squadron flew 72 sorties and as the Japanese anti-aircraft batteries were strong and their gunners highly experienced the

[3] By June 1943 there were 7 squadrons under this headquarters—2 of Lightnings, 2 of Kittyhawks, 1 of Beaufighters (No. 30 RAAF), 1 of Bostons (US) and 2 of Mitchells.

Boston crews were subjected to grave risks over the target area. In one such raid, made on 16th March, one Boston commanded by Flight Lieutenant Newton[4] with Flight Sergeant Lyon[5] and Sergeant Eastwood[6] as crew members, dived in through intense anti-aircraft fire and bombed with devastating accuracy. A large fire followed the bomb explosions and this was increased by the bombs of the following aircraft. When Newton pulled his aircraft out of the dive four direct hits by enemy fire had damaged severely both wings and one engine and had punctured the fuel tanks. Even so he succeeded in flying the aircraft 180 miles back to its base and in landing it. The attack had been so successful that it was repeated two days later. Newton again dived his aircraft low to blast a building adjacent to an anti-aircraft battery. The Japanese gunners' aim was accurate and as the Boston cleared the target it was seen to be severely damaged and on fire. Newton had no alternative but to ditch the aircraft in the sea close to the isthmus. Other Boston crews saw his aircraft go down and later reported having seen two crew members swimming towards the beach. There was some hope that, having reached the shore, they might escape the attention of the enemy and perhaps be picked up by one of the A.I.F. patrols that were known to be making daring sorties along the coast. This proved vain and Newton and his crew were posted missing.[7] With this additional loss intensifying their purpose, the members of No. 22 Squadron continued their low-level attacks on the enemy's positions.[8]

[4] F-Lt W. E. Newton, VC, 250748. 21 and 22 Sqns. Warehouseman; of St Kilda, Vic; b. St Kilda, 8 Jun 1919. Executed by Japanese 29 Mar 1943. Before enlisting Newton had been a keen all-round amateur sportsman engaging in cricket, football, golf and water polo. His future in cricket had been regarded as very promising as he was an outstandingly fast bowler, for which he won the V.C.A. Colts' Bowling Average Cup for 1937-38, and was selected in the Victorian second eleven for the same season. In August 1938 he was a member of the Victorian team for the Interstate Amateur Games held in Hobart.

[5] F-Sgt J. Lyon, 401706; 22 Sqn. Foundry moulder; of Footscray, Vic; b. Glasgow, Scotland, 19 Apr 1916. Missing air operations 18 Mar 1943.

[6] Sgt B. G. Eastwood, 13055; 22 Sqn. Clerk; of Caulfield, Vic; b. Healesville, Vic, 26 Feb 1912. Killed in action 18 Mar 1943.

[7] This was Newton's 52nd operational sortie.

[8] Seven months later (on 20th October 1943) Newton was honoured by the posthumous award of the Victoria Cross. The citation stated that 90 per cent of his attacks had been made through anti-aircraft fire. After captured enemy documents had been examined, one Japanese soldier's diary was found to contain a detailed account of the beheading of an Allied airman—"one of two members of the crew of a Douglas which was shot down by anti-aircraft [fire] on the 18th [March]". The author of the diary claimed that the airman was "accorded a Samurai's death". A footnote to the diary entry included the statement that "the prisoner killed today was an Air Force Tai [captain or flight lieutenant] from Port Moresby". Thus the date of capture, the reference to the aircraft by the maker's name, the rank of the victim and the general circumstances, all seemed to identify the Allied airman as Newton. On 5th October, GHQ, SWPA, released to the Allied Press this Japanese account of the execution in all its grim detail, but without identifying the airman. At this time the Director of Intelligence, Allied Air Forces (Wing Commander Charlton) informed both GHQ and RAAF HQ that since the document from which the press release on the atrocity was written was not an official Japanese document and since the evidence, though very circumstantial, did not contain conclusive proof of identity, he was not prepared to state definitely that the victim of the execution had in fact been identified. AVM Bostock, as air officer commanding RAAF Command, held that announcement of the identification of the victim would alter the reaction of members of the particular squadron "from the impersonal to the closely personal" and could therefore "seriously affect morale". This view was supported by the Chief of Press Relations GHQ, Col LeGrande A. Diller. On 12th October 1943 the Australian Press published a statement by the Prime Minister, Mr Curtin, announcing that, because of widespread anxiety among relatives of captured or missing members of the forces which had followed the public disclosure of the execution, the relatives of the Allied airman who had been beheaded by the Japanese had been informed of his identity. In May 1945 a photograph taken at the scene just before the execution and found among enemy documents, was widely circulated through the Allied newspapers. Sir William Webb, Chief Justice of Queensland, who had been appointed to investigate crimes committed by the Japanese in the war period, referred to the Salamaua atrocity in the course of his report. He stated that when about to complete his report on this particular atrocity he received evidence that the body of an Australian airman who had been beheaded had been recovered from a bomb crater at Kela Point, Salamaua, where the airman mentioned in the diary had been executed. "This," Sir William Webb reported, "tended to confirm the authenticity of the account from enemy sources."

CORRECTION

p. 699, in footnote 8, nine lines from end, *delete* sentence beginning "In May 1945 . . . "

Insert:

In May, 1945, a Japanese photograph of an execution found among captured enemy documents was circulated through Allied newspapers. Captioned "An Allied Airman", it was widely believed at the time to be that of Newton. It has since been established that the photograph was of an Australian scout and radio operator captured at Aitape in 1943.

That fear of defeat was now entering the minds of the enemy commanders has been revealed in post-war records. As one Japanese chronicler has stated it:

> The Pacific war had run through its first full cycle and the enemy was on the move . . . it was necessary to hold back the mounting enemy blows until we had secured our defences. . . . The effectiveness of the enemy air strength was brought to the admiral [Yamamoto] with the news of a crushing defeat [Bismarck Sea battle] which, if similar events were permitted to occur in the future, promised terrifying disasters for Japan.[9]

Admiral Yamamoto had now personally assumed command of all his air forces in the area and had set up advanced command headquarters at Rabaul. A commander with the highest reputation for skill and determination, and holding immense respect and admiration among his troops, Yamamoto saw as his most immediate and urgent purpose the destruction of Allied air power in the New Guinea and Solomons areas. He could have had no illusions about this formidable task, which was labelled Operation-A or, to the Japanese—*I-Go Sakusen.* To attempt it he had a total of 350 aircraft—190 operated by the *26th Air Flotilla* of the *XI Air Fleet* which, under Rear-Admiral Kusaka, had been brought to Buin; 160 of the *1st Carrier Division* commanded by Vice-Admiral Ozawa (who had replaced Vice-Admiral Nagumo); and the balance drawn from the *21st Air Flotilla* at Kavieng (Rear-Admiral Ichimaru), and the *2nd Carrier Division* (Vice-Admiral Kakuda) nominally based on Rabaul but at this stage at Ballale Island, near Buin. These forces, though the main strength of Japanese air power, were weaker than those with which Nagumo had assaulted Pearl Harbour, or the force that initiated the attacks on the Philippines and Malaya. Though Yamamoto's use of twin-engined attack bombers gave him a bomb-carrying capacity rather greater than that of the bombers used by the forces that had made those first assaults, the very grim fact he had to accept was that the Japanese now had fewer aircraft in action than when they first went to war, whereas Allied aircraft production had mounted steadily. Added to this disability the wastage in combat aircrews had been acute so that pilots for Operation-A were now being drawn from pilot training schools—men who virtually were fledglings with but 30 days of carrier training and whose inexperience was such that losses from aircraft destroyed in flying accidents mounted even before the pilots had had time to meet the more experienced Allied pilots in combat.

Operation-A was given its first real impetus on 7th April when American ships, assembled at anchor off the Guadalcanal coast, were attacked in strength. Four days later 45 Japanese dive bombers and fighters raided Oro Bay and, though Allied radar was now proving its worth—the Japanese were met by a force of 50 Lightnings and Kittyhawks which reported the destruction of 17 of the enemy aircraft in battle—the attackers gained two direct bomb hits on a 2,000-ton cargo ship and damaged a small supply ship and a corvette.

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[9] Okumiya, Horikoshi and Caidin, *Zero,* p. 236.

On 12th April the enemy made their 106th air raid on Port Moresby.[1] Though adequate radar warning permitted Allied interception, which cost the Japanese 15 bombers and at least 9 fighters for the loss of only 2 American fighters, the defenders suffered considerably on the ground. Four aircraft (one Beaufighter and 3 Mitchells) were destroyed and 15 others were damaged, some of them severely. At Ward's, Berry and Schwimmer aerodromes the runways were damaged, and at Kila several men working at a fuel dump were burned to death when enemy bombs exploded the drums. After one more raid on Milne Bay on the 14th, which was ineffective, this series of enemy air attacks ended.

It was now clear that Allied fighter pilots were more than a match in tactics, skill and morale, for their adversaries, who were losing aircraft at a rate that promised to become disastrous for them.[2]

In a post-war review of Operation-A, a Japanese commentator has written:

> Pilots' reports of the four heavy raids indicated that we had inflicted severe damage on the enemy, and intelligence officers reported to Admiral Yamamoto that we sank one cruiser, two destroyers and twenty-five cargo and transport ships; shot down in air combat 134 planes, and wrecked others in ground attacks which severely damaged four enemy air bases. (Again our pilots over-estimated the efficiency of their attacks, for post-war investigation revealed that the Americans, while hit hard, suffered far less damage than we were led to believe.) Our losses included at least forty-nine planes shot down and missing, in addition to those which were damaged.
>
> Convinced by his pilots' reports that his original goal of wreaking great havoc among the American airfields and reducing the effectiveness of enemy air power had been accomplished, Yamamoto declared Operation-A as concluded successfully and ordered his land-based air forces to resume their original attack missions. He sent the carrier-based planes back to Truk, where they rejoined their original groups. . . . The demands of Operation-A disorganised the 1st Carrier Division's air groups, which was ordered to return to Japan for reorganisation, new aircraft and extended training. To compensate for the loss of the 1st Carrier Division's planes, Admiral Kakuda regretfully split into two units his own 2nd Carrier Force, assigning half his strength to Truk and the remainder to the Marshall Islands.[3]

Believing Operation-A to have been completed with great damage to the American forces, Yamamoto decided to make a personal assessment of his forward bases in the Solomons and hold discussions with the commander of the *XVII Army,* General Hyakutake. At 6 a.m. on 18th April he took off from Rabaul in a Betty bomber for the Japanese air base at Ballale. With him were three of his staff officers while Vice-Admiral Matome Ugaki, chief of staff of the combined Japanese Fleet, with four other staff officers, followed in a second bomber. When off the west coast of Bougainville and approaching Ballale the two Betty bombers were

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[1] To the end of March the Japanese had made 105 air attacks on Port Moresby, 23 on Milne Bay, and 19 on Merauke in Dutch New Guinea.

[2] Early in May Allied Intelligence reports indicated that the Japanese aircraft strength between 7th April and 4th May had declined by 145—from 611 to 466.

[3] Masatake Okumiya, air staff officer to Admiral Kakuda throughout the period.—*Zero,* pp. 240-1.

attacked by four American Lightning fighters which broke through the Japanese fighter cover. Ugaki, anxiously watching the other bomber in which his commander-in-chief was flying, was (as he expressed it later) "horrified to see it flying slowly just above the jungle, heading to the south with bright orange flames rapidly enveloping the wings and fuselage. . . . Although I hoped for the best I knew only too well what the fate of the aircraft would be. As our [own] bomber snapped out of its turn I scanned the jungle. The Betty was no longer in sight. Black smoke boiled from the dense jungle into the air. . . ."[4] And so Yamamoto died. Ugaki's own bomber was also shot down into the sea but he himself escaped.

A Japanese coded message having been "cracked" by American naval Intelligence, the American headquarters on Guadalcanal were informed of Yamamoto's full itinerary, the identity of the staff officers who would travel with him, the types of aircraft to be used and the strength of their fighter escort. It was even noted that the Japanese admiral was most punctilious. It remained for the Lightnings to be sent from Henderson Field, make the long flight to Ballale (approximately 450 miles) and time their arrival with equal punctuality. This they did most effectively. While 12 American aircraft flew as top cover, the four attack aircraft quickly had the Japanese bombers at their mercy. The Zeros accounted for one Lightning shot down and several others were damaged.

From the single viewpoint of the R.A.A.F. the task ahead was proportionately as great as it had been when the war began. One measure of the effort the Service was now putting into the war was expressed in the number of aircrew trained for combat. The total at 31st March 1943 was 20,670. Of these 13,390 were trained in Australia—5,571 for R.A.A.F. squadrons and 7,819 for service with the R.A.F.; 7,208 aircrew had been sent overseas to complete their basic training.

With more than 20,000 aircrew representing what has been referred to as the "cutting edge" of the force, there had, of course, to be a very heavy manpower commitment for all the essential non-combatant ancillary duties. Among these were officers and men whose contribution has been somewhat overshadowed in these chapters by the attention necessarily devoted to combat and the planning for combat. There were those who undertook without hesitation the hazardous work of bomb disposal. It was their task to dig out and render ineffective the unexploded bombs left by the enemy after each air raid. Though their skill was such that casualties were few, they repeatedly worked under the threat of death. Theirs was a distinctive type of courage. As occasion has dictated, attention has been directed to the state of morale in the force in given situations. This, in itself, has underlined the need for and the value of the physical, psychological and spiritual aids provided by such organisations as the Chaplains' Branch, the Rehabilitation Section, the Red Cross, the Salvation

[4] *Zero*, p. 248.

Army, the Young Men's Christian Association and the Australian Comforts Fund. From members of the Air Board and the operational commanders to the humblest of aircraftmen, the work of those engaged in administering these welfare services was fully recognised and appreciated. It was work performed with great thoughtfulness and diligence, and performed best where it was most needed—in conditions ranging from acute boredom to the highest tensions of combat at least as they were endured on the ground. It had also, of course, considerable psychological influence on those engaged in air combat. Air Board policy laid it down that the spiritual welfare of members of the R.A.A.F. should be provided by duly appointed R.A.A.F. chaplains representing the various denominations and that "no other body or organisation be permitted to take any official part in any work of a spiritual nature in any R.A.A.F. unit or station". Chaplains also engaged readily and effectively in a very practical way in cooperation with the various welfare organisations both Service and civilian.

Of all aids to morale none had greater influence than the work performed by the R.A.A.F. Postal Service whose task presented many difficult problems of administration and transport that varied exactly as did the operational situation on every front on which the men of the R.A.A.F. were engaged. As with supplies of any kind it was the men who were actually engaged in combat whose need was greatest and most difficult to meet. Yet served they were by the Postal Service and with remarkable felicity.

Duties performed in a non-combatant capacity often imposed their own peculiar psychological penalty on the individual. In no role was this penalty heavier than in that of the flying instructor. By virtue of the very skill and technical capacity he had acquired he was the more conscious of his individual fitness for combat. Perhaps no words sum up this consciousness more effectively than a piece of cynical doggerel verse that was current among instructors. The first verse and chorus were:

"What did you do in the war, Daddy?
How did you help us to win?"
"Circuits and bumps and loops, Laddie,
And how to get out of a spin."

So it's "Woe and alack and misery me,
I trundled around in the sky,
And instead of machine-gunning Japs[5]
I was teaching young ——s to fly!"

Throughout this volume there has been much emphasis on what was, in effect, an endemic complaint—frustration caused by shortages in the supply of aircraft. This condition was aggravated by the almost equally fitful supply of other types of equipment. And, since plans to form new squadrons

[5] In the original, a product of the RAF, the reference was to Nazis instead of "Japs".

had to be changed from time to time in the most disconcerting way, the whole problem of the expansion of the Service was most complex. These difficulties were still acute at the end of March 1943. It will be recalled that, in March 1942, the War Cabinet had approved the 73-squadron plan; that, two months later, the plan was for 45 squadrons by the end of 1943; and that, in September, the Air Board had decided cautiously that planning "for the present" should be restricted to a total of 35 squadrons by April 1943.

When the plan for 35 squadrons was approved by the War Cabinet on 5th October 1942, it instructed that the plan was to be reviewed in six months' time, or earlier if additional aircraft should become available. Two months later the Australian Legation in Washington informed the Air Board that there were indications that during 1943 the R.A.A.F. might receive from overseas sufficient aircraft for a further six squadrons, whereupon the board decided to submit a 51-squadron plan to the War Cabinet with April 1943-September 1944 as the development period. This would include 3 Beaufort, 5 Boomerang, 6 Mosquito and 2 CA-11 (bomber) squadrons.[6]

The Minister, Mr Drakeford, was critical. In a minute to the Air Board dated 9th January 1943, he noted that the proposed development could be achieved from Australian production alone. This, however, implied the manufacture of aircraft in numbers much in excess of the totals for which War Cabinet approval had been given.[7] The Minister told the board that the availability of the CA-11 was at this stage "too hypothetical" to be regarded as appropriate for such purposes "having in view our recent advices to D.A.P. [Department of Aircraft Production] concerning deferment of production [of this type] . . . pending satisfactory tests. . . ." He directed that the scale of expansion should be governed by the number of additional squadrons that could be formed in 1943 from existing orders and the number of aircraft that "could reasonably be expected" from the United States in that year. Orders additional to those already approved by the War Cabinet must be so approved before being accepted as available for further expansion. The Air Board must closely examine this last point and provide details of the additional aircraft required, together with a delivery program, an estimate of costs, and the number of squadrons that could be so formed, "to permit early submission to War Cabinet". The Minister reminded the Air Board that Cabinet approval was necessary for all changes in organisation. Full manpower details covering the current

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[6] As at December 1942 production estimates were: Beauforts, 25 a month to provide 409 aircraft by September 1944; Boomerangs, 36 a month—592 by September 1944; Mosquitos, 146 by December 1943 and thereafter 20 a month to provide 326 by September 1944; CA-11, 105 on order with production (expected to total 300 by September 1944) to begin at a date dependent on deliveries of engines from the USA and in production at Lidcombe. Though the total anticipated production of the CA-11 by September 1944 was expected to exceed requirements, it was held that the excess could be exported and the number so disposed of offset against allocations of the other types of aircraft to be obtained from overseas.

[7] The comparative figures for the various types of aircraft with the number required and the number approved by Cabinet shown in parentheses, were: Beauforts, about 700 (450), Boomerangs, 600-700 (200), Mosquitos, 326 (150).

35-squadron plan and the proposed new program were called for. Could the manpower authorities, he asked, meet the needs of all establishments under the proposed expansion?

On 14th January the Australian Minister in Washington, Sir Owen Dixon, informed the Prime Minister that the American Chiefs of Staff would recommend to the Combined Chiefs of Staff the allocation to Australia of sufficient aircraft from overseas for nine new squadrons.[8] This recommendation was approved 11 days later. Dixon, in his cable message, noted that the remainder of the new squadrons needed to raise the strength of the force from 30 to 45 squadrons, would be equipped with locally produced aircraft—3 squadrons of Beauforts and 4 of Boomerangs. This would bring the total increase to 16 squadrons, but the number of Hudson units had been reduced from three to two. The total number of aircraft in the R.A.A.F. would be increased from 615 under the 30-squadron state, to 873 for 45 squadrons. To bring existing units to strength, equip the new ones and replace wastage caused by attrition, up to the end of December 1943, the contribution from American production would be 654 aircraft.

It now seemed that the Air Board's rather cautious expectation of aircraft supplies from overseas was no longer in question and there was an understandable note of irritation and uneasiness in the reaction of the Chief of the Air Staff to the Minister's minute of 9th January. This was revealed in a supplementary paper which Air Vice-Marshal Jones put before the Air Board on 6th February. In this he claimed that if additional aircraft orders were placed locally to the full extent of the manufacturers' capacity, a further eight squadrons could be formed and maintained by the end of 1944. It was desirable, however, to make this aspect the subject of a further submission after the types to be produced had been clarified, and to confine the current submission to expansion on the basis of present allocations from overseas and local orders actually placed. "There is no reason to suppose," Jones wrote, "that the urgency for the maximum development of the air force has in any way slackened and the absence of War Cabinet's full approval to proceed with that development, to the maximum possible in all respects, is viewed with concern."

There followed a long memorandum, dated 9th February, addressed to the Minister, in which Cabinet approval was sought for 45 squadrons by December 1943 and 51 squadrons by December 1944. The memorandum referred to Dixon's message and to the clarification of the aircraft allocation from the United States. In assessing the contribution in aircraft expected from local production the additional requirement in Beauforts was maintained at 700, but the number of Boomerangs and Mosquitos was left at the initial order level—200 and 150 respectively. The current and two future stages of operational squadron strengths were set out thus:

[8] Of these 9 squadrons, 2 would be of Catalinas, 3 of Kittyhawks, 3 of C-47 Dakota transports and one of C-60 Lodestar light transports.

Type of Sqn	Number at Jan 1943	Number at Dec 1943	Number at Dec 1944
G/R bomber	6	5	9
Torpedo	1	4	4
G/R flying-boat	2	4	4
Dive bomber	5	8	8
Interceptor fighter	6	12	12
Long-range fighter	2	4	6
Army cooperation	2	2	2
Fleet cooperation	1	1	1
Transport	5	5	5
	30	45	51

Expansion was proposed on definite allocations and local orders placed to date for the stage to December 1943; the next stage would be proposed "in due course" on the basis of the manufacturers' capacity in 1943 and 1944. As submitted the plan did provide for a "balanced force". The Minister was reminded that the War Cabinet in a minute dated 2nd March 1942, approving the principle of the 73-squadron plan, had stated: "The implementing of the proposals is to be progressive, having regard to the indications which may be obtained as to the availability of aircraft for this purpose; financial authority may be anticipated to the extent required to give effect to this decision." The Minister was assured that "continuous touch" was maintained with the manpower authorities who had not in any way queried the R.A.A.F. demands and had indicated that there was a "reasonable prospect" of meeting the estimated needs for ground staff, amounting to approximately 20,000 airmen and airwomen in the first six months of 1943.[9]

Emphasising that the supply position was "very difficult", the memorandum warned the Minister that unless additional orders were placed immediately, there was a "definite risk" that the Service would be unable to put the aircraft available to it into operation against the enemy for lack of essential facilities and equipment. It was "most strongly" urged that War Cabinet approval should be obtained for the development of the air force as proposed together with the needed ancillary units, and for the establishment of such other ancillary units as were required to meet the operational needs of the Allied Air Forces in the South-West Pacific Area.

This statement of the Air Board's problems at this time is, of course, very far from complete. To bring the picture into its full perspective it can be thought of as a vast jigsaw made up from very small pieces. It may well be doubted whether any armed force had ever before accepted such a multiplicity of obligations in so many areas, under so many commands and with such assorted and limited facilities. As war came in September 1939 the first pieces of this jigsaw were being only tentatively fitted together.

[9] A manpower statement appended to the memo showed the total strength of the force (RAAF and WAAAF, and excluding aircrew under training) at 1 January 1943 as 105,115. This was expected to rise to more than 133,000 by 31 December. The wastage allowance to cover reserves was 7 per cent of establishment in operational units and 5 per cent in training units; the annual wastage in the total of 133,000 was set at 6,000.

Now at the end of the first quarter of 1943, it had been filled in to include Australian airmen being trained in their own country, in Canada, in Britain and in Rhodesia and—much more significantly—Australian airmen fighting in the skies over Britain, France, Germany, Italy and the Middle East. Then, with the onslaught of the Japanese, they are seen fighting over India, Malaya, Burma, the Netherlands East Indies, Papua and New Guinea, the Solomon Islands, Australia itself and over the vast stretches of sea separating these territories. Eulogy is superfluous. On the other hand, it is against this intricate pattern that all criticism for such weaknesses, errors and failures as are revealed in these pages should be matched.

Quite apart from its continuing and—in proportion to its strength—very considerable share in the war against Germany and Italy, the R.A.A.F. had now taken a very vital part in 16 months of most bitter conflict against the Japanese—again in a way that was the more remarkable in view of the limitation in the size of the force available. And now, in this theatre, a very fundamental change had taken place. The Allied forces in the South-West and South Pacific Areas were conscious of two vital developments. One was that, though from their viewpoint all too slowly, their own strength was growing. The other was that the strength of the enemy was weakening. Most apparent was the fact that the enemy had lost their air superiority; Japanese mastery in the air, which for so long had helped to determine successive phases of combat in their favour, had ended.

APPENDIX 1

MILITARY AVIATION 1909-14

THE comprehensive story of the war operations of the Australian Flying Corps is told in Volume VIII of the *Official History of Australia in the War of 1914-18*.[1] Two earlier events—the founding of the Central Flying School and the formation of the Aviation Instructional Staff—have their place in the opening chapter of the present volume, but behind them was a series of decisions and incidents without record of which the picture of the growth of military aviation in Australia is incomplete.[2]

The first of these was an announcement by the Commonwealth Government on 8th September 1909 that a prize of £5,000 would be awarded to the inventor or designer of the flying machine adjudged by the Minister for Defence to be the best and most suitable for military purposes. This award was subject to conditions, the principal one being that the aeroplane should remain over a marked area of not more than half a square mile and should "be navigated at such a speed as will permit of a comprehensive description of the land in the area being made by an observer in the aeroplane". Though there were more than forty entries, including several from Britain, no prize was awarded.

The next infusion of official activity followed correspondence in the *Brisbane Courier* in September and October 1910, in which Charles Lindsay Campbell, secretary of the Queensland Aero Club and honorary secretary of the Aero League of Australia, advocated that Australian aviation engineers and mechanics should be sent to Britain and the Continent for training and then brought back to form the nucleus of a Commonwealth school of aviation and an Australian aviation corps. Campbell was particularly clamant after the *Courier* had published some rather negative opinions on military aviation expressed by Admiral Sir Reginald Henderson,[3] then engaged at the invitation of the Government, in preparing a report on the Commonwealth's naval defences. These opinions, Campbell claimed, tended "to lull the average public into a false sense of security by dismissing the practicability of aviation in warfare, except for scouting purposes". Campbell stoutly challenged Henderson's opinion on the effectiveness of a projectile dropped from an aeroplane. Damage, Henderson considered, would be "only local". Campbell's picture was that of an aeroplane which "at a height of a few hundred feet could, with certainty, drop the most dangerous explosive down the 30-foot diameter smoke stack of one of the modern 'Dreadnoughts'." In January 1911

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[1] F. M. Cutlack, *Official History of Australia in the War of 1914-18*, Vol VIII, *The Australian Flying Corps* (1923).

[2] An account of the early days of flying in Australia has been provided by Stanley Brogden in *The History of Australian Aviation* (1960).

[3] Admiral Sir Reginald Henderson, GCB; RN. B. Worth, Kent, Eng, 20 Nov 1846. Died 12 Jul 1932.

he gained an interview with the Minister for Defence (Senator Pearce) in Melbourne and later submitted a plan in writing. In this he undertook to organise and direct a school of aviation and an aviation corps in conjunction with Gaston Cugnet, member of the Aero Club of France, and a pupil of the renowned Blériot, who had made a contract with him to cooperate in the advancement of aeronautics in Queensland. Campbell set out his own credentials which included experiments dating back to box-kite work from 1893 to 1903; experiments with gliders and later with aeroplanes (one an amphibian which he had entered for the Commonwealth prize of £5,000).

Pearce sent the plan to the Military Board which, on 17th January 1911, replied cautiously that there had been considerable agitation outside the forces for the formation of an aviation corps and pointed to the research by British Army experts who, so far, had not adopted any definite type of aeroplane. Since the Minister would soon be visiting England, the Board recommended that action should be deferred until he had been able to consult experts at the War Office. Also at the Board's suggestion, interim advice was sought from the War Office by cable message, the reply to which, sent from London on 31st January, informed Cabinet that Mr E. T. Willows, constructor and navigator of the dirigible airship *City of Cardiff,* which had recently flown from London to Paris, was willing to come to Australia to demonstrate this airship for defence purposes. The War Office commended this proposal. Pearce answered by asking that a decision be deferred until he reached England in May.

Meanwhile the British and Colonial Aeroplane Company, later the Bristol Aeroplane Company Ltd, had sent one of its aircraft, a biplane powered by a 50 horse-power Gnome engine, to Melbourne, and in February, Major C. H. Foott, of the Royal Australian Engineers, on instructions from the Chief of the General Staff (Brigadier-General J. M. Gordon) witnessed trials with this aeroplane, which was piloted by Mr J. J. Hammond. He reported favourably on its performance. A final entry in the diary Foott kept during the trials is a graphic little reminder that aviation was then very much in its infancy. "24th February 1911—" the entry ran, "Was to have gone for flight as passenger; 5 a.m.—Wind gusty, 3 to 6 m.p.h.; 7 a.m.—Fair breeze, 5 m.p.h.; 8 a.m.—Abandoned attempt." "The competition for the £5,000 prize has, so far as I know, produced no tangible results," Foott wrote in his report. "I think it extremely unlikely that any real effect will be produced by individual research with limited means. . . . It is, I think, obvious that instruction by an experienced aviator on a known pattern of machine is far less dangerous than wild attempts by untrained persons on machines of unknown qualities. For this reason I strongly recommend consideration of the B. and C.A. Company's terms if . . . it is intended to establish a fleet here." As a nucleus for a fleet, Foott suggested four flying machines with eight trained aviators and ten mechanics. His recommendation went

to the Military Board which decided to take no action pending further information from the War Office.

Then, on 30th December 1911, the Commonwealth Government[4] called for applications for "Two competent mechanists and aviators". In July 1912 H. R. Busteed, an Australian then in England as chief test pilot of the Bristol Aeroplane Company, and H. A. Petre, were appointed, and orders were placed for two B.E. biplanes (70 h.p. engines) and two Deperdussin monoplanes (35 h.p. engines).

In September, on the advice of General Gordon, the Government rejected an offer by the French organisation, *Societe Anonyme des Ateliers D'Aviation,* to train pilots and to provide training equipment and eight aircraft for a military squadron.

An Army Order issued on 25th September 1912 proposed the organisation of one flight of an aeroplane squadron with four aeroplanes and an establishment of four officers, seven warrant officers and sergeants and 32 air mechanics. Two of the officers, one sergeant and six mechanics were to be permanent and the remainder militia. The permanent men were to form a flying school in Federal Territory. Then on the advice of the War Office an order was placed for a slow-type Bristol biplane for training. In October Busteed withdrew his application and a fellow Australian, E. Harrison, a Bristol pilot who had served as a mechanic with Harry Hawker, a noted Australian airman, was appointed in his place.

While all this planning had been going on, Lieut-Colonel J. G. Legge, who, in his subsequent role as Chief of the General Staff, was to exert so great an influence on the initial planning for an Australian air force, was serving as a liaison officer at the War Office. On 1st November 1912, having learned of the Military Board's plans, Legge wrote a critical report in the course of which he noted that the only persons with expert knowledge of aviation were two pilots neither of whom had any knowledge of military discipline or organisation and whose pay was to be only £400 a year. "The best class of aviators can command much larger remuneration," he wrote. "In civil establishments the pilots are the star artists; their work consists of flying pure and simple. . . . In a military organisation the work in peace is necessarily on almost the same lines as in war. . . . In a dangerous occupation of this character there must be that very high degree of mutual confidence obtained from strict discipline. . . . A mere flying certificate is of no more value for war than is a riding certificate . . . for the creation of an efficient cavalry soldier." Legge strongly urged the appointment of a thoroughly competent officer of some length of service to command the flying school in Australia and the training of mechanics in England or the selection in England of trained mechanics as instructors. Gordon's reply was that the aviators selected should be able to teach flying, that the necessary military instruction must come later and that Australian mechanics would first be tested before adopting English training or importing instructors.

[4] *Commonwealth Gazette,* No. 97.

Petre, therefore, after watching the construction of the Deperdussins, came to Australia in January 1913. On his recommendation the flying school site was changed from Federal Territory to Point Cook, where 734 acres were bought. This site had the advantage that it offered facilities for both land and sea plane operations. In the same year the Aviation Instructional Staff was formed at Point Cook with Petre and Harrison as its first officers—the rest of the staff comprised four mechanics[5] selected in England, one quartermaster-sergeant, one clerk and one caretaker. By the end of January 1914 Petre and Harrison were on the job with the five aeroplanes that had been ordered from Britain. On 17th August the first of a series of eight flying courses began and Australia was on the way to producing her own airmen. Conditions were primitive—the school was under canvas except for an office and a workshop—but its officers wrought well. Of the two Petre, quiet and academic by nature, was the more deeply knowledgeable in aviation. For his part he concentrated on the immediate task, leaving the not unimportant task of publicising the school to his more assertive colleague, Harrison. Partly because of this and partly because of his own subsequent long term of service with the force which grew out of these beginnings, it was Harrison who gained the title "Father of the R.A.A.F.". In fact, this was an appellation to which Petre was, at least, equally entitled.

The A.I.S. continued its service until September 1918. It was then disbanded in favour of No. 1 Home Training Squadron which, in turn, was disbanded in December 1919.

[5] H. J. Chester, A. E. Shorland, G. A. Fonteneau and C. V. Heath, DCM.

APPENDIX 2

THE AIR FORCE LIST—1925

EXAMINATION of the *Air Force List* for 1925 provides a clear picture of the legacy in manpower which the First World War left and of its use in the preparation, organisation and administration of the R.A.A.F. as a vastly expanded force in the war of 1939-45. In July 1925 there were 75 Permanent Force officers and 11 Citizen Force officers in the R.A.A.F. As Chief of the Air Staff and First Air Member, Williams had recently been gazetted a group captain—the highest rank yet attained by a R.A.A.F. officer. Goble was Chief of the Administrative Staff and Second Air Member, with the rank of wing commander. In July he went to England to take the course at the R.A.F. Staff College. In his absence W. H. Anderson, then a squadron leader, acted as Second Air Member and Air Member for Personnel. Williams and Goble (with Anderson acting as his deputy) held places on the Air Council (presided over by the Minister for Defence, Major-General Sir Neville Howse, V.C.) together with the First Naval Member, Rear-Admiral P. H. Hall-Thompson; the Chief of the General Staff, Lieut-General Sir Harry Chauvel and H. C. Brinsmead as Controller of Civil Aviation. The Air Board comprised Williams, Goble (with Anderson then acting for him), with A. C. Joyce as Finance Member and P. E. Coleman as Secretary.

The General Duties Branch of the Permanent Force had seven squadron leaders, six of them former members of the Australian Flying Corps. These were: Anderson; Eric Harrison, one of the A.F.C's two original flying instructors and then in England; L. J. Wackett; A. T. Cole, who was Director of Personnel and Training; F. H. McNamara, V.C., then on exchange duties with the R.A.F.; and H. N. Wrigley, Director of Organisation and Staff Duties. The seventh squadron leader, R. S. Brown, was the R.A.A.F. Liaison Officer in London. Another squadron leader, on exchange from the R.A.F., R. M. Drummond, of whom much was to be heard in the Second World War, was serving as Director of Operations and Intelligence.

Among the 14 Permanent Force general duties flight lieutenants were five former A.F.C. members: A. H. Cobby, F. W. F. Lukis, George Jones, E. A. Mustard and J. R. Bell. A further six flight lieutenants had served with the R.A.F. in the First World War: H. F. De La Rue, J. H. Summers, W. D. Bostock, R. J. Brownell, A. Hepburn and A. E. Hempel. At this stage Bostock was listed as a technical officer of whom there were eight in the whole force. The 36 Permanent Force flying officers included 11 seconded from the army, among them F. M. Bladin, D. E. L. Wilson, U. Ewart, J. P. J. McCauley, G. Packer and A. M. Charlesworth, all to become senior R.A.A.F. officers in the 1939-45 War. Three flying officers on loan from the R.A.N. included David Ross, another officer to

hold senior appointments in the Second World War. There were only two pilot officers listed on the permanent strength, one of these being F. R. W. Scherger, seconded from the army. In the Stores and Accounting Branch of the Permanent Force were 14 officers headed by two squadron leaders, P. A. McBain and his next in command, T. R. Marsden. In the same branch were three flight lieutenants each with military decorations, while among the seven flying officers in the branch was G. J. W. Mackinolty who had been a sergeant mechanic in the First Half-Flight, A.F.C.

Eleven officers were listed in the General Duties Branch of the Citizen Force, three of them flight lieutenants who had fine records from the First World War—G. F. Malley, L. H. Holden and E. C. Johnston. Of the remaining eight, all flying officers, two, H. A. Rigby and H. T. Hammond, were former R.A.F. officers and two, A. L. Long and H. W. Ross, former A.F.C. officers.

APPENDIX 3

THE R.A.A.F. IN THE DARWIN RAIDS

WHEN the seriousness of the effects of the first air raids on Darwin became known the Government ordered a Commission of Inquiry under the National Security Regulations.[1] Mr Justice Lowe,[2] who was appointed Commissioner on 3rd March, submitted a first report on the 27th and a final report on 9th April.[3]

Mr Justice Lowe found the failure of R.A.A.F. operations to communicate with A.R.P. Headquarters "inexplicable", and the delay in giving the general raid warning, "fraught with disaster". It was "plain that the station commander must take some responsibility for the failure of action on the part of the Royal Australian Air Force Operations". There was "other evidence to indicate that this particular Service was conducted with some laxity. No log book was kept before 6th February 1942, and the log book kept after that date discloses a gap in the entries between 16th and 20th February 1942." The station commander's verbal order to the R.A.A.F. staff was "extremely unfortunate" since it became "completely distorted". But he (the Commissioner) had seen some of the men when they gave evidence before him and he was satisfied both from their appearance and from what he had heard from officers, that their quality was not unsatisfactory; the failure had arisen "owing to lack of training and lack of leadership at the relevant time". He had been told that "these men were scarcely at all trained in the use of arms". He was willing to believe that, as Air Vice-Marshal Bostock had testified, much of the trouble was due to the very rapid expansion of the air force, but the position, in other respects, did not appear incapable of remedy.

Criticising the layout of Darwin station, Mr Justice Lowe found it "little suited to meet such an attack as came on 19th February". The lessons taught by the war in Crete, Malta and Malaya and by German practice had not been used, though they were known to many R.A.A.F. officers; a memorandum from the Directorate of Intelligence contained much information on the subject.[4] It was probably unfair to attribute the blame for this lack of organisation and dispersal wholly to the commander of the station, whose service had been so short. In his (the Commissioner's) opinion the condition of the station was a prime factor in the extent of the losses which followed. On the evidence the ground defences were insufficient, though this was probably due to inability to

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[1] Regulation 3 of Statutory Rule No. 35 of 1941.

[2] Hon Sir Charles Lowe, KCMG. Justice of the Supreme Court of Vic since 1927, Acting Chief Justice 1950-51, 1953; Chancellor, University of Melbourne, 1941-54. B. Panmure, Vic, 4 Oct 1880. He was assisted by Messrs J. V. Barry, KC and H. G. Alderman (of Counsel).

[3] Together with observations by the Departments of the Navy, Army, Air and Interior, these reports became *Command Paper No. 40*, (Group D)—F6454, 5th October 1945. For detailed accounts of the naval, military and civil aspects of the raids the reader is referred to other volumes in this history.

[4] Memorandum No. 3 of 20 Aug 1941.

obtain the needed supplies. None of the three methods of air-raid warning had been in use—radio location, air observer system, or wireless Intelligence units—for the interception and direction finding of enemy aircraft and signal traffic. The Radio Physics Research Board, of which the Chiefs of Staff were members, had discussed the installation of radio location at Darwin as early as November 1940 and again in August and September 1941. An installation of the type used in Great Britain was at all times available, but it was only on the last date that it was decided to erect at Darwin another unit. Even then the matter apparently had been treated with a "leisureliness out of keeping with the urgency of the occasion".

The Commissioner praised Group Captain Scherger and Squadron Leader Swan stating: "He [Scherger] . . . acted in my opinion with great courage and energy . . . on all the evidence before me his conduct . . . was deserving of the highest praise. Another officer whose conduct during and after the raid merits commendation is Squadron Leader Swan."

The Department of Air and the Air Board took prompt action to assess the evidence obtained both by the Service itself and by the Commissioner. A survey of the lessons learned from the raids and of the corrective action taken and proposed, was contained in a frank report contributed, on 24th April, by Air Vice-Marshal Bostock on behalf of the Chief of the Air Staff. Bostock pointed first to the significance of Darwin as a part of ABDA Command, the headquarters actually responsible for operations in the Darwin area at the time of the raids. There had been, his report stated, considerable difficulty concerning the allocation of reconnaissance responsibility. This was the chief reason for the visit to Bandung of the air officer commanding and for his absence from Darwin at the time of the raids, and it had been the cause of a partial breakdown in Intelligence which should have given warning of the likelihood of attack. But, Bostock emphasised, these facts in no way mitigated the two main failures that took place—the failure of R.A.A.F. Operations to give warning of the raid and failure to maintain a log book.

The delay in identifying the approaching aircraft was not entirely excused by the facts which had suggested to the controller in the operations room that they could only be American Kittyhawks. Bostock's report added that a large number of aircraft had been reported, flying at great height. Also the controller knew that enemy bombers could reach Darwin from Ambon. Continued false warnings would occur, especially in the initial stages of war, and, although nothing was worse than repeated false alarms, it was almost impossible to prevent them until adequate and essential services were installed and the staff trained in their working and their maintenance. Responsibility for the delay was shared by Area Combined Headquarters which, by a decision of the Darwin Defence Committee, accepted air raid warnings as one of their functions. Failure to maintain a complete log of events in the operations room was a matter for internal administration and was being attended to. In its lack of

effective aerodrome defence measures—training for action under a bombing attack—the air force was "gravely at fault". A contributory difficulty was the impossibility of providing adequate equipment and labour. Overdispersal, combined with want of organisation beforehand, was another weakness. In spite of lack of training—to some extent due to lack of equipment and the fact that most members of the force were experiencing their first air attack—there was little excuse for the administrative chaos that occurred. The R.A.A.F. had expanded in a way possibly unprecedented in the history of a highly technical service—from approximately 3,000 men to about 67,000 in two years and a half of war conditions. To obtain large numbers of men with both the desired quality of leadership and technical proficiency was difficult.

Locally made radar location equipment had been selected for Darwin because it was lighter and more easily transported by air than two other sets available. The set had been installed before the raids occurred but was not then ready for operation. It was now operating with considerable success. A second set was being installed and a third would be installed if priority permitted. Corrective action had also been taken by establishing a fighter sector headquarters, the controller of which was in telephone and radio contact with the radio location units, coastwatchers and air observers. These sources of information were supplemented by radio-telephone Intelligence and air and sea reconnaissance reports. From the sum of all these the controller directed fighter squadrons by telephone or radio telephone for the interception of enemy aircraft. In his conclusion Bostock wrote: "The urgent need to apply the lessons learned is fully appreciated and the importance of these has been impressed on all concerned."

APPENDIX 4

AIRCRAFT IN USE BY THE R.A.A.F. 1921-39 AND AUSTRALIAN, BRITISH, AMERICAN AND JAPANESE AIRCRAFT 1939-45

IN these tables aircraft first imported by the R.A.A.F. but later manufactured in Australia have been included in the Australian section rather than in the British or American sections.

As in Volume III of this series, the lists of aircraft show the progressive improvements of the principal types. However, in cases where some British and American aircraft were developed by a series of minor modifications, each distinguished by a "mark" or series letter, only a few of these have been included. More sub-types of these aircraft are shown in the Appendix to Volume III.

Headings are designed to be self-explanatory to the lay reader, except perhaps "service ceiling", which is the altitude at which an aircraft fails to climb at a rate in excess of 100 feet per minute, as distinct from "absolute ceiling", at which altitude the aircraft will not climb at all.

Maximum speeds at the altitudes considered to produce optimum efficiency are stated.

Performance details have been compiled for aircraft operating under "flight test" conditions; any discrepancies between these figures and actual performance will be readily appreciated by aircrew readers as due to factors such as climate, modifications effected on squadron, maintenance, the human element and, most of all, the "operational age" of the engine.

On occasions where it has been found impossible to obtain even reasonably accurate information it was decided to leave a gap rather than insert data of the "informed-guess" variety. Paucity of detail was encountered particularly for aircraft developed during and immediately after the war of 1914-18.

The exacting task of research and compilation was undertaken principally by Mr L. H. Johnswood and Mr R. S. Gunter of the R.A.A.F. Historical Section to whom the writer owes both thanks and congratulation.

AUSTRALIAN FIGHTER AIRCRAFT

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
BEAUFIGHTER— Mk 21 (Developed from Mk X)— Twin engines; crew 2	1,200 (a) 1,800 (b)	303 at 10,000	22,500	4 x 20-mm & 4 x .50-in & 1 x .303-in	(*a*) with 1,000-lb bomb-load (*b*) with rocket projectiles
BOOMERANG— Single engine; crew 1	930	296 at 7,600	29,000	2 x 20-mm	Fighter and army co-operation
MOSQUITO Mk 40— Twin engines; crew 2	1,720	376 at 22,000	—		Reconnaissance and fighter-bomber, developed from British Mosquito Mk VI
MUSTANG P-51— Single engine; crew 1	1,050	390 at 8,000	32,000	4 x .50-in & 4 x .30-in or 20-mm	
MUSTANG P-51D— Single engine; crew 1	2,160 1,075 (a) 830 (b)	437 at 24,500	41,500	4 or 6 x .50-in	(*a*) 2,000-lb bombs, maximum fuel; (*b*) 1,000-lb bombs, normal fuel

MUSTANG— Single engine; crew 1	920	424	41,500	6 x .50-in	Aust-manufactured CA-17 fighter or fighter-bomber; carried 2 x 500-lb bombs or 6 rocket projectiles
WIRRAWAY— Single engine; crew 2	510	220 at 8,600	23,000	3 x .303-in	Training and army cooperation; normally no bombs, sometimes 2 x 250-lb

AUSTRALIAN BOMBER AIRCRAFT

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb.)				
BEAUFORT— Twin engines; crew 4	1,600 1,060	nil 2,000	259 at 8,500	25,000	9 x .303-in	Mks V, VI, VII & VIII. Carried normal load of 1,000 lb of bombs or 1,629 lb torpedoes; maximum load 2,000 lb bombs or 2,127 lb torpedoes

BRITISH FIGHTER AIRCRAFT

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
BEAUFIGHTER Mk Ic— Twin engines; crew 2	900 (normal) 1,620 (extra fuel)	345 at 12,250	30,000	4 x 20-mm & 6 or 7 x .303-in	Could carry 1,000 lb
BEAUFIGHTER Mk VIc— Twin engines; crew 2	1,810 1,210 (*a*)	333 at 15,600	25,500	4 x 20-mm & 6 x .303-in	(*a*) with 1,650-lb torpedo
BEAUFIGHTER Mk Xf— Twin engines; crew 2	1,645 1,470 (*a*)	303 at 1,300 (*b*) 285 at 10,000 (c)	14,000	4 x 20-mm & 1 or 6 or 7 x .303-in; & 7 x 60 or 90-lb rocket projectiles	(*a*) with 2,127-lb torpedo (*b*) with torpedo (*c*) with rocket projectiles
HURRICANE Mk I— Single engine; crew 1	340 600 (extra fuel)	330 at 17,500	30,250	8 x .303-in	
HURRICANE Mks IIa, b & c— Single engine; crew 1	500 1,000 (extra fuel)	342 at 22,000	36-41,000	8 or 12 x .303-in or 4 x 20-mm	IIb could take 1,000 lb bombs. Mk II used by RAF in Burma
MOSQUITO Mk VI— Twin engines; crew 2	1,650 (*a*) 1,270 (*b*)	380 at 13,000	33,000	4 x 20-mm & 4 x .303-in	(*a*) with 1,000 lb (*b*) with 2,000 lb Fighter bomber

SPITFIRE Mk Vc— Single engine; crew 1	459 1,000 (*a*)	365 at 22,000	36,500	2 x 20-mm & 2 x .303-in or 8 x .303-in or 4 x 20-mm	Could take 500 lb (*a*) with extra fuel
SPITFIRE Mk VIII— Single engine; crew 1	1,180 (*a*)	408 at 25,000	43,000	4 x 20-mm or 2 x 20-mm & 4 x .303-in	Could take 1,000 lb (*a*) with extra fuel

BRITISH BOMBER AIRCRAFT
(including bomber transport, bomber reconnaissance & torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
ALBACORE— Single engine; crew 2-3	521	1 torpedo or 1,500	161 at 4,500 (*a*) 169 at 4,500 (*b*)		3 x .303-in 3 x .303-in	(*a*) as torpedo bomber (*b*) as reconnaissance aircraft
ANSON— Twin engines; crew 3 or 4	730 600 normal 1,040 maximum	Nil 500 500	178 at 7,000	18,000	2 x .303-in	Reconnaissance version of what was usually a trainer

BRITISH BOMBER AIRCRAFT—*continued.*
(including bomber transport, bomber reconnaissance & torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
BATTLE— Single engine; crew 2 or 3	640 876 (*a*)	1,000 1,500	257 at 15,000	25,000	2 or 3 x .303-in	(*a*) maximum fuel; Estimates for range vary greatly
BEAUFORT Mks V, VI, VII— Twin engines; crew 4	1,780 1,070	2,000	234 at 5,000	26,000	9 x .303-in	Could take maximum of 2,000 lb bombs or 2,127 lb torpedoes
BLENHEIM Mk I— Twin engines; crew 3	920	1,000	265 at 15,000	27,000	2 x .303-in	Day bomber; also used as night fighter
BLENHEIM Mk IV— Twin engines; crew 3	1,457 (*a*) 1,615 (*b*)	1,000	266 at 15,000	26,000	5 x .303-in (*a*) 6 or 7 x .303-in (*b*)	(*a*) Long-range bomber (*b*) Long-range fighter version, known as Mk IVf

EMPIRE FLYING-BOAT— Four engines; crew 5	810	2,000 (*a*)	200 at 5,500	20,000	Nil	(*a*) Empires were fitted with racks for 4 x 500-lb bombs, but seldom had them. Mainly used for reconnaissance and transport. One carried 50 men in retreat from Rabaul
FULMAR Mk II— Single engine; crew 2	820		253 at 10,000	22,300	8 x .303-in or 4 x .50-in	Shipborne
MOSQUITO Mk XVI— Twin engines; crew 2	1,870 1,795 1,370	1,000 2,000 4,000	415 at 28,000	36,000	Nil	Also used for photo-reconnaissance
SHARK— Single engine; crew 2-3	550	1 torpedo or 1,500	149 at 11,800	16,400	2 x .303-in	Torpedo bomber/ reconnaissance
SWORDFISH— Single engine; crew 2-3	528 672	1,500 Nil	139 at 5,000	17,000	2 x .303-in	Torpedo bomber/ reconnaissance
VILDEBEESTE Mk IV— Single engine; crew 2 or 3	480 685 (*a*)	500 500	153 at 10,000	20,600	2 x .303-in	Also torpedo bomber; (*a*) maximum fuel
WELLINGTON Mk IV— Twin engines; crew 6	1,510	4,500	229 at 13,000	18,000	6 x .303-in	

OTHER BRITISH AIRCRAFT

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
AUSTER Mk III— Single engine; crew 1 or 2	145		126 at 0	12,000	Nil	Personal aircraft; took 3 persons including crew
DRAGON-RAPIDE (DH89a)— Twin engines; crew 1	556	1,452 (*a*)	155 at 0	16,700	Nil	Transport. (*a*) cargo or passengers
EXPRESS (DH86)— Four engines; crew 2	450	2,184 (*a*)	166 at 0	17,400	Nil	Transport and air ambulance (*a*) cargo or passengers
LYSANDER— Single engine; crew 3	600	1,855	229 at 10,000	26,000	4 x .303-in	Army cooperation, target towing training, air-sea rescue
OXFORD— Twin engines; crew 2 or 3	874	Nil 184	184 at 10,000 (*a*)	19,300 (*b*)	1 x .303-in	Training and transport. (*a*) Mk V: 202 mph at 4,100 feet. (*b*) Mk V: 21,000 feet

SEAGULL Mk V (Walrus)— Single engine; crew 2 to 4	600 428	Nil 500	135 at 5,000	16,800	2 x .303-in	Air-sea rescue. Flying-boat. Also bomber/reconnaissance
TIGER MOTH— Single engine; crew 1 or 2	258 (*a*)	385 (*b*)	109 at 0	14,000	Nil	Also a seaplane version. Personal, training and transport. (*a*) Mk I: 258m; Mk II: 191m. (*b*) 385-lb cargo or one passenger and cargo (crew 1)

AMERICAN FIGHTER AIRCRAFT

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
AIRACOBRA P-39, P-400— Single engine; crew 1	800 (*a*) 1,000 (*b*)	375 at 20,000	32,000 (*c*) 38,000 (*d*)	1 x 37-mm or 20-mm (*e*) and 2 x .50-in and 4 x .30-in	(*a*) with 500 lb bombs; (*b*) with maximum fuel; (*c*) P-39D; (*d*) P-39Q; (*e*) P-400
BLACK WIDOW P-61A & B— Twin engines; crew 3	630 (*a*) 1,900 (*b*)	355 at 20,000 (*a*) 369 at 20,000 (*b*)	30,000 (*a*) 33,100 (*b*)	4 x 20-mm or 4 x 20-mm and 4 x .50-in	(*a*) P-61A; (*b*) P-61B

AMERICAN FIGHTER AIRCRAFT—*continued.*

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
BUFFALO— Single engine; crew 1	520 normal 900 maximum	295 at 18,500	30,000	4 x .50-in	Could take 200 lb bombs
CORSAIR F3A— Single engine; crew 1	1,915	409 at 19,900	40,000	6 x .50-in	Fighter-bomber: took 3,200 lb bombs
HELLCAT F6F-3, F6F-3N and F6F-5— Single engine; crew 1	1,600	375 at 17,300	37,000	6 x .50-in	F6F-3N night fighter version. Could take up to 2,000 lb bombs or one torpedo. Range and speed varied with load
KITTYHAWK Mks I, Ia— Single engine; crew 1	800 470 (*a*)	350 at 15,000	30,600	4 x .50-in (*b*) 6 x .50-in (*c*)	(*a*) with 500-lb bomb; (*b*) P-40D; (*c*) P-40E
KITTYHAWK Mks II, III— Single engine; crew 1	1,190	346 at 5,000	30,000	4 or 6 x .50-in	P-40F, L, M, N. Also fighter-bombers: Mk II maximum load 600 lb; Mk III maximum load 1,000 lb. *See also* Warhawk (below)

KITTYHAWK Mk IV— Single engine; crew 1	1,210	352 at 11,000	32,500	6 x .50-in	Also fighter-bomber. Maximum load 1,000 lb P-40M
LIGHTNING P-38D— Twin engines; crew 1		420 at 20,000	39,000	Nil	Photo reconnaissance
LIGHTNING P-38J— Twin engines; crew 1	1,910 900 (*a*)	414 at 25,000	43,800	1 x 20-mm and 4 x .50-in	(*a*) P-38H had 2 x 1,600-lb bombs
REPUBLIC P-35— Single engine; crew 1	1,000 (*a*)	320 at 12,000	30,800	1 x .50-in and 1 x .30-in	(*a*) with 300 lb bombs
THUNDERBOLT P-47M— Single engine; crew 1	1,200	470 at 30,000	42,000	6 or 8 x .50-in	Could take 500 lb bombs
THUNDERBOLT P-47N— Single engine; crew 1	1,030	448 at 35,000	42,000	6 or 8 x .50-in	Could take 2,500 lb bombs or 1,000 lb bombs and 10 x 5-in rocket projectiles
TOMAHAWK P-40 B & C— Single engine; crew 1	890	345 at 16,000	31,000	4 x .30-in or 2 x .50-in and 2 x .30-in or 2 x .50-in and 2 x .303-in	No bombs

AMERICAN FIGHTER AIRCRAFT—*continued.*

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
WARHAWK P-40N— Single engine; crew 1	1,550	343 at 15,000	38,200	6 x .50-in	Also fighter-bomber: maximum load 1,500 lb
WILDCAT F4F-4— Single engine; crew 1	1,150	330 at 19,500	28,000	6 x .50-in	Naval fighter; also adopted for torpedo bomber and reconnaissance

AMERICAN BOMBER AIRCRAFT
(including bomber reconnaissance, bomber transport and torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
AVENGER— Single engine; crew 3	905		278	22,600	3 x .50-in and 2 x .30-in	Torpedo bomber
BOSTON A-20— Twin engines; crew 3	840	1,500	312 at 15,000	32,600	6 x .303-in	

BOSTON A-20A— Twin engines; crew 2 to 4	1,200 817 610	Nil 1,100 2,400	338 at 10,000	29,300	6 or 8 x .30-in	Could carry 2,600 lb bombs
BOSTON A-20C, J & K— Twin engines; crew 4	1,550 700	2,000 4,000	315-320 at 11,000	27,000	4 x .303-in or 4 x 20-mm and 6 x .303-in (*a*) or 5 x .50-in (*b*) or 9 x .50-in (*c*)	(*a*) A-20C; (*b*) A-20J; (*c*) A-20K
CATALINA PBY-5— Twin engines; crew 4 to 10	3,100 2,350	Nil 1,300	196 at 7,500	14,700	2 x .50-in and 2 x .30-in	Flying-boat: bombing reconnaissance, air/sea rescue, transport and mine-laying; PBY-5A was amphibian version
DAUNTLESS A-24— Single engine; crew 2	1,590 750	1,000 (*a*) 1,000	253 at 15,600	26,000	2 x .50-in and 2 x .30-in	Dive bomber. Maximum load 2,250 lb; (*a*) extra tank; SBD-6
FLYING FORTRESS B-17E— Four engines; crew 6 to 10	2,500 1,415 1,208	Nil 2,500 4,000	295 at 30,000	36,600	8 x .50-in and 1 x .30-in	

AMERICAN BOMBER AIRCRAFT—*continued.*
(including bomber reconnaissance, bomber transport and torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
FLYING FORTRESS B-17G— Four engines; crew 11	2,350 2,250 1,100	4,000 6,000 12,800 maximum	295 at 30,000	36,000	13 x .50-in	External racks could increase bomb-load to 17,600 lb
HAVOC A-20G, H & K— Twin engines; crew 3	1,255 (*a*) 505 (*a*) 1,300 (*b*) 650 (*b*)	2,000 4,000 2,000 4,000	322 at 15,000 (*a*) 317 at 10,000 (*b*)	24,000	9 x .50-in	American original of RAF Boston, not to be confused with night fighter Havoc, which was RAF version of Boston night fighter. (*a*) A-20 H & K (*b*) A-20G
HELLDIVER A-25— Single engine; crew 2	1,430 (*a*) 1,420 (*b*)	1,000 1,000	281 at 12,400 (*a*) 294 at 16,700 (*b*)	24,700 (*a*) 29,300 (*b*)	2 x 20-mm or 2 x 20-mm and 2 x .30-in or 4 x .50-in and 2 x .30-in	Dive bomber: (*a*) SB2C-1 (*b*) SB2C-3. Maximum bomb-load both types was 2,650 lb

HUDSON Mks I, II— Twin engines; crew 4 or 5	1,355	900	222 at 7,900	24,500	7 x .303-in	Medium bomber and reconnaissance
HUDSON Mk IV— Twin engines; crew 4 or 5	1,465	400	242 at 11,500	24,500	7 x .303-in	As for Marks I and II
LIBERATOR B-24D— Four engines; crew 8	2,470 1,290	3,500 12,800	275 at 20,000	33,000	8 x .50-in and 4 x .303-in	
LIBERATOR B-24G, J & H— Four engines; crew 7 or 10	2,500	3,000	300 at 30,000	34,000	10 x .50-in or 6 x .50-in and 4 x .303-in	Maximum bomb-load 16,000 lb. Reconnaissance version B-24J took 4,500 lb
MARAUDER B-26B & C— Twin engines; crew 5 or 6	1,800 1,150 1,075	Nil 3,000 5,200	285 at 5,000	23,400 21-25,000 (*a*)	4 x .50-in and 2 x .30-in (*a*) or 8 or 12 x .50-in (*b*)	(*a*) B-26B; (*b*) B-26C
MITCHELL B-25 B, C & D— Twin engines; crew 5 or 6	1,975 1,375	Nil 3,200	266 at 11,500	24,600	10 x .50-in	
MITCHELL B-25G— Twin engines; crew 4	1,375	3,200	272 at 5,000	25,000	1 x 75-mm and 8 x .50-in	B-25G was first aircraft to have a 75-mm cannon as well as .50-in MG
MUSTANG A36A— Single engine; crew 1	800 1,500	1,000 Nil	310 at 5,000	29,400	6 x .50-in	Dive bomber version of P-51 fighter

AMERICAN BOMBER AIRCRAFT—*continued.*
(including bomber reconnaissance, bomber transport and torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
SUPERFORTRESS B-29A— Four engines; crew 11	3,400 3,250	4,000 10,000	342 at 30,000	33,600	11 x .50-in	Maximum bomb-load 20,000 lb
VENGEANCE A-35— Single engine; crew 2	1,200 1,100	1,000 1,500	291 at 13,500	21,500	5 x .50-in	Dive bomber

OTHER AMERICAN AIRCRAFT

Aircraft	Still Air Range With Associated Load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
COMMANDO C-46A— Twin engines; crew 4	2,950 1,200 800	2,000 10,000 22,100	269 at 15,000	27,600	Nil	Could carry 50 troops. Transport aircraft

DAKOTA C-47A— Twin engines; crew 2 to 4	2,050 1,600	2,000 6,700 11,000	217 at 10,000	24,000	Nil	American designation C-47 Skytrain. Transport aircraft. Version modified for 27 paratroops designated C-53 Skytrooper
DOUGLAS DC2— Twin engines; crew 2 to 3		6,152	210 at 8,000	22,450	Nil	Transport aircraft used by RAAF for reconnaissance and as a flying classroom for wireless air gunners
DOUGLAS DC-3— Twin engines; crew 4 to 6	2,125	8,335	230 at 8,500	23,200	Nil	The C-47 and C-53 were both military adaptations of the DC-3
LIBERATOR EXPRESS C-87— Four engines; crew 4 or 5	2,856 2,300	3,100 10,000	306 at 2,550	32,000	Nil or 1 x .50-in	Transport version of B-24; could carry 20 troops
LODESTAR C-60A— Twin engines; crew 3	2,300 1,200	1,450 5,000	269 at 15,000	20,100	Nil	Transport aircraft; could carry 18 paratroops

OTHER AMERICAN AIRCRAFT—*continued*

Aircraft	Still Air Range With Associated Load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
MARINER PBM-3D— Twin engines; crew 7	3,405 2,665	Nil 2,600 12,800	211 at 16,100	19,800	8 x .50-in	Designed for bombing, reconnaissance and torpedo-dropping; used by RAAF as transport aircraft.
SKYMASTER C-54B— Four engines; crew 4 or 5	3,200 2,050	8,000 21,000	270 at 5,000	22,200	Nil	Transport aircraft; could carry 49 troops

JAPANESE FIGHTER AIRCRAFT
(Allied Code Names)

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
ALF 12 (KAWANISI E7K2)— Single engine; crew 3	550 535 (*a*)	140 at 5,000	18,000	2 x 7.7-mm	Float-plane. (*a*) with 500 lb bombs and maximum fuel. Also trainer
CLAUDE 14 (MITSUBISHI A5M4)— Single engine; crew 1	600 1,000 (*a*)	250 at 9,000	33,000	2 or 4 x 7.7-mm	(*a*) Maximum fuel
FRANCES 12 (YOKOSUKA P1Y1-S)— Twin engines; crew 3	2,925	354 at 20,050	35,600	4 x 20-mm and 1 x 30-mm	Night fighter
FRANK 1 (NAKAJIMA Ki84)— Single engine; crew 1	1,025 1,800 (*a*)	426 at 23,000	39,000	2 x 12.7-mm and 2 x 20-mm	(*a*) with jettisonable tanks; thought to have carried up to 440 lb bombs
GEORGE 11 (KAWANISI N7K2-J)— Single engine; crew 1	1,200 1,730 (*a*)	416 at 19,000	39,100	6 x 20-mm or 2 x 13.2-mm and 2 x 20-mm or 2 x 7.7-mm and 4 x 20-mm	(*a*) maximum

JAPANESE FIGHTER AIRCRAFT—*continued.*
(Allied Code Names)

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
IRVING 11 (NAKAJIMA J1N1 & J1N1-S)— Twin engines; crew 2	1,985	333 at 19,700	32,740	4 or 5 x 20-mm or 4 x 20-mm and 1 x 30-mm	Night fighter and reconnaissance
JACK 11 (MITSUBISHI J2M1 & J2M2)— Single engine; crew 1	650 1,127 (*a*)	407 at 17,400	37,500	4 x 20-mm or 2 x 20-mm & 2 x 7.7-mm	(*a*) maximum with 154 lb bombs
JACK 21 (MITSUBISHI J2M3)— Single engine; crew 1	1,300	417 at 16,600	38,000	4 x 20-mm	No bombs
MITSUBISHI Navy Type 96-2a— Single engine; crew 1	440	250 at 9,000	31,000	2 or 4 x 7.7-mm	Deck-landing fighter; fixed undercarriage
MITSUBISHI Navy Type 97 (a)— Single engine; crew 1	590	265 at 11,000	30,000	2 x 7.7-mm	Deck-landing fighter (*a*) Believed to be a development of the 96-2a with retractable undercarriage

NATE 1 (NAKAJIMA Ki27, Type 97)— Single engine; crew 1	300 (*a*) 460 (*b*) 800 (*c*)	222 at 9,500 (*a*) 270 at 15,000	33,000	2 x 7.7-mm	Normally no bombs. As suicide aircraft 1,100 lb. (*a*) suicide conditions; (b) normal; (*c*) maximum fuel
NICK 1 (KAWASAKI Ki45, Type 2)— Twin engines; crew 2	1,909 1,390 (*a*)	353 at 18,500 330 at 20,600 (*a*)	35,800	2 x 17.7-mm or 1 x 37-mm	Fighter-bomber and night fighter. Normal bomb-load 220 lb; suicide bomb-load 1,100 lb. (*a*) Suicide conditions
OSCAR 1 (NAKAJIMA AND RIKUGUN Ki43, Type 1/1)— Single engine; crew 1	775 1,200 (*a*)	315 at 13,500	35,000	2 x 12.7-mm or 1 x 12.7-mm and 1 x 7.7-mm	(*a*) maximum fuel
OSCAR 2 (NAKAJIMA AND TACHIKAWA Ki43/2, Type 1/2)— Single engine; crew 1	1,885 1,125 (*a*)	333 at 19,100	35,900	2 or 4 x 12.7-mm	Fighter-bomber (*a*) with 440 lb

JAPANESE FIGHTER AIRCRAFT—*continued*
(Allied Code Names)

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
OSCAR 3 (NAKAJIMA AND TACHIKAWA Ki43/3, Type 1/3)— Single engine; crew 1	1,305 1,995 (*a*)	358 at 21,900	37,400	2 or 4 x 12.7-mm	Fighter-bomber: normal and maximum bomb-load 440 lb; (*a*) with maximum fuel
REX 11 (KAWANISI N1K1)— Single engine; crew 1	1,000	336 at 19,600	28,000	2 or 4 x 7.7-mm and 2 x 20-mm or 6 x 7.7-mm	Float-plane. Fighter-bomber: maximum load 264 lb; normal load nil
RUFE 11 (MITSUBISHI A6M2-N)— Single engine; crew 1	1,000 (*a*) 1,700 (*b*)	273 at 14,700	32,900	2 x 7.7-mm and 2 x 20-mm	Float-plane based on Zeke; could carry 264 lb bombs
SAM 11 (MITSUBISHI A7M1)— Single engine; crew 1	700	395 at 19,686		6 x 20-mm or 2 x 20-mm and 2 x 13.2-mm	Carrier-based fighter

TOJO 2 (NAKAJIMA Ki44/2)— Single engine; crew 1	740 1,050 (*a*)	380 at 17,300	36,350	2 x 7.7-mm and 2 x 12.7-mm or 4 x 12.7-mm or 2 x 7.7 or 12.7-mm and 2 x 40-mm	(*a*) maximum fuel
TONY 1 (KAWASAKI Ki61/2, Type 3/1)— Single engine; crew 1	1,050 2,010 (*a*)	361 at 15,800	36,000	4 x 7.7-mm or 2 x 12.7-mm and 2 x 7.7-mm or 12.7-mm	Could carry maximum bomb-load of 440 lb; (*a*) maximum fuel
TONY 2 (KAWASAKI Ki61/2, Type 3/2)— Single engine; crew 1	1,520 2,010 (*a*)	423 at 28,000 (b)	43,300	4 x 12.7-mm or 4 x 20-mm or 2 x 12.7-mm and 2 x 20-mm	(*a*) maximum fuel (*b*) Possibly less than this; could take 440 lb bombs
ZEKE 11 (MITSUBISHI)— Single engine; crew 1	1,250 (*a*) 1,870 (*b*)	330 at 16,000	38,000	2 x 20-mm and 2 x 7.7 mm	(*a*) with 264 lb bombs; (*b*) with maximum fuel. Carrier-borne A6M2 known as Zeke 21

JAPANESE FIGHTER AIRCRAFT—*continued.*
(Allied Code Names)

Aircraft	Still Air Range (Statute Miles)	Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
ZEKE 32 (MITSUBISHI A6M3)— Single engine; crew 1	1,100 (*a*) 1,968 (*b*)	348 at 20,600	36,000	2 x 20-mm and 2 x 7.7-mm	Sometimes called Hamp. Also modified version called Zeke 22. (*a*) With 264 lb bombs; (*b*) Maximum fuel
*ZEKE 52 (MITSUBISHI A6M5)— Single engine; crew 1	1,844	340 at 19,700	35,000	2 x 7.7-mm &/or 13.2-mm &/or 20-mm or 4 x 13.2-mm and 2 x 20-mm	Fighter-bomber: normal bomb-load 140 lb; maximum 264 lb. Zeke 53 (A6N5) similar, but fired 10 x 22-lb or 2 x 132-lb rockets

* Confusion has arisen over the alternative names loosely used during the war of "Zeke", "Zero" and "Oscar" for Japanese radial single-engine fighter aircraft. The original Zero or Zeke 11, produced by Mitsubishi, was the "Type O" carrier-borne fighter used in the attack on Pearl Harbour. The confusion occurred later when other Japanese firms produced fighters descendant of, or closely resembling in silhouette, the original Zeke 11.

JAPANESE BOMBER AIRCRAFT
(including bomber/reconnaissance, bomber transport and torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
BABS 12 (MITSUBISHI C5M2)— Single engine; crew 2	*c.* 1,000 450 1,240 (*b*)	1,100 (*a*) 660	269 at 13,800 (*a*)	30,000	2 or 3 x 7.7-mm	Suicide bomber and reconnaissance. Babs was *Kamikaze* ("Divine Wind") (*a*) suicide condition (*b*) maximum fuel
Baka BOMB— Rocket propelled; crew 1	54	2,645	620 (*a*)		Nil	Suicide bomb (*a*) Maximum diving speed
BETTY 11 (MITSUBISHI)— Twin engines; crew 5 to 7	3,290 2,635 3,740	Nil 2,200 Nil	279 at 14,700	28,200	1 x 20-mm and 4 x 7.7-mm	Performance estimates vary greatly. Also reconnaissance version with torpedo: slightly faster and higher

JAPANESE BOMBER AIRCRAFT—*continued.*
(including bomber/reconnaissance, bomber transport and torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
BETTY 22 & 24 (MITSUBISHI G4M2 & G4M2A)— Twin engines; crew 5 to 7	3,075	2,205	283 at 13,800	30,400	2 or 4 x 7.7-mm and 4 x 20-mm or 2 x 7.7-mm and 1 x 13-mm and 1 x 20-mm or 2 x 20-mm and 5 x 7.7-mm	Naval land-based bomber Also Betty 25 (G4M2B) and Betty 34 (G4M3) Later used as carrier for *Baka* bombs
DAVE 11 (NAKAJIMA E8N1)— Single engine; crew 2	320 500	500 220	170 at 11,000	25,000	2 x 7.7-mm	Float-plane; reconnaissance
DINAH 2 (MITSUBISHI Ki46/2, Type 100/2)— Twin engines; crew 2	1,800	Nil	370 at 20,000	37,400	1 x 7.7-mm	Reconnaissance only
DINAH 3 (MITSUBISHI Ki46/3, Type 100/3)— Twin engines; crew 2	1,730	Nil	420 at 10,700	40,600	1 x 7.7-mm	Reconnaissance only

EMILY 12 & 22 (KAWANISI H8K2)— Four engines; crew 9 to 12	4,606 3,000	Nil 3,530 (*a*)	296 at 19,680	28,000	5 x 20-mm and 6 x 7.7-mm or 6 x 20-mm or 2 x 20-mm and 4 x 7.7-mm	Flying-boat. Reconnaissance and torpedo bombing (*a*) two torpedoes. Also Emily 11 and 32
FRANCES 11 (YOKOSUKA P1Y1)— Twin engines; crew 3	3,500 2,500	Nil 2,000 (*a*)	354 at 20,600	30,000	2 or 5 x 20-mm	(*a*) Took either normal load of 1,100 lb bombs or maximum of 2,237 lb bombs or one 1,875-lb torpedo
GRACE 11 (AICHI B7A1)— Single engine; crew 2	2,075 1,695	1,100 (bomb) 1,760 (torpedo)	350 at 19,686	34,850	3 x 7.7-mm or 2 x 20-mm and 1 x 13 or 7.7-mm	Torpedo bomber
HELEN 2 (NAKAJIMA Ki49/2, Type 100/2)— Twin engines; crew 7	1,600	2,200	312 at 16,500	30,930	3 x 7.92-mm and 2 x 12.7-mm and 1 x 20-mm	Heavy bomber
HELEN 3 (NAKAJIMA Ki49/3, Type 100/3)— Twin engines; crew 4 or 5	2,218	1,655 2,205	338 at 16,500	36,080	1 x 20-mm and 3 x 12.7-mm and 2 x 7.7-mm	Heavy bomber

JAPANESE BOMBER AIRCRAFT—*continued.*
(including bomber/reconnaissance, bomber transport and torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
IDA 1 (TACHIKAWA AND MITSUBISHI Ki36, Type 98)—						
Single engine; crew 2-3	995 850	330 1,100 (*a*)	203 at 5,000 195 at 4,920 (*a*)	27,000	2 or 3 x 7.7-mm	Reconnaissance bomber and trainer (*a*) suicide condition
JAKE 11 (AICHI E13A1)—						
Single engine; crew 2 or 3	1,375 1,100 900	nil 132 264	222 at 7,600	29,800	1 x 20-mm or 1, 3 or 4 x 7.7-mm	Float-plane reconnaissance bomber
JILL 12 (NAKAJIMA B6N2)—						
Single engine; crew 2 or 3	2,300 2,010 1,080	nil 1,760 3,250	300 at 16,080	35,400	2 or 3 x 7.7-mm or 1 x 7.7-mm and 1 x 20-mm	Torpedo bomber. Also carried bombs
JUDY 11 (YOKOSUKA D4Y2)—						
Single engine; crew 2	2,580 820	550 1,100	297 at 16,405	33,100	3 x 7.7-mm	Reconnaissance and dive bomber. Reconnaissance version designated Yokosuka D4Y2-R

JUDY 12 & 13 (AICHI D4Y2)— Single engine; crew 2	2,445	550 1,100	370 at 19,500	36,400	3 x 7.7-mm	Judy 13 was carrier-borne. Reconnaissance and dive bomber
JUDY 33 (AICHI D4Y1-A)— Single engine; crew 2	2,530 924 2,505	nil 1,100 550	390 at 18,500	38,300	3 x 7.7-mm or 2 x 7.7-mm and 1 x 7.92-mm	Reconnaissance and dive bomber
KATE 11 & 12 (NAKAJIMA B5N2)— Single engine; crew 2 or 3 (*a*)	2,240 1,380 (*b*) 650 1,665 (*d*)	nil 800 1,760 (*c*) 1,760	230 at 9,000 (*e*)	24,000	3 x 7.7-mm	Torpedo bomber. (*a*) Crew 2 with torpedo, 3 with bombs. (*b*) Maximum fuel. (*c*) Torpedo. (*d*) Kate 12, carried maximum fuel also. (*e*) Kate 12 slightly faster and of greater range
LILY 1 (KAWASAKI Ki48, Type 99)— Twin engines; crew 4 or 5	1,315 850	792 1,600	290 at 12,000	28,900	4 x 7.92-mm or 1 x 12.7-mm and 2 x 7.92-mm	Light bomber

JAPANESE BOMBER AIRCRAFT—*continued.*
(including bomber/reconnaissance, bomber transport and torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
LILY 2 (KAWASAKI Ki48/2, Type 99)— Twin engines; crew 4 or 5	1,410 5-600	660 1,500	310 at 20,700	34,300	3 x 7.92-mm and 1 x 12.7-mm or 4 x 7.92-mm and 1 x 7.7-mm (*a*) or 3 x 12.7-mm and 1 x 7.92-mm and 1 x 7.7-mm (*a*) or 4 x 7.7-mm or 1 x 7.92-mm and 1 x 12.7-mm	Light bomber (*a*) Models heavily armed with turrets and free gun positions carried no bombs, their purpose being exclusively for use by the formation commander to direct an operation
LIZ 11 (NAKAJIMA G5N1)— Four engines; crew 8	2,990	6,600 7,040	270 at 16,100	29,100		Heavy bomber and transport
LORNA 11 (WATANABE OR KYUSHU Q1W1)— Twin engines; crew 3	1,680 1,440 (*a*)	1,100 2,200 (*a*)	190 at 4,900 184 at 4,900 (*a*)	20,300	1 x 7.7-mm	Reconnaissance bomber; (*a*) suicide conditions

MAVIS 11, 22 & 23 (KAWANISI H6K5)— Four engines; crew 8 to 10	3,980 3,300 about 1,500	nil 1,584 3,520 (*a*)	210 at 6,000	24,680	1 or 2 or 4 x 7.7-mm and 1 or 3 or 4 x 20-mm	Flying-boat. Reconnaissance, transport or torpedo bomber. (*a*) 2 x 1,760-lb torpedoes
MYRT 11 (NAKAJIMA C6N1)— Single engine; crew 2 or 3	2,640 1,600	nil (*a*) 1,760	396 at 16,600	34,100	1 x 7.7 or 7.92-mm	Reconnaissance and torpedo bomber; (*a*) maximum fuel
MYRT 12 (NAKAJIMA C6N1)— Single engine; crew 3 or 4	2,900 1,840	nil (*a*) 1,760	390 at 19,680		1 x 7.92-mm	Reconnaissance and torpedo bomber; (*a*) maximum fuel
NELL 11 (MITSUBISHI G3M2 Type 96)— Twin engines; crew 4 to 7	2,600 1,700 1,000	nil (*a*) 1,000 2,200 (*b*)	230 at 10,000	30,000	6 x 7.7-mm or 5 x 7.7-mm and 1 x 20-mm	Bomber, torpedo bomber and transport; (*a*) maximum fuel; (*b*) 1 x 1,760-lb torpedo
NELL 22 (MITSUBISHI G3M2 Type 96)— Twin engines; crew 4 to 7	2,240	2,200 or 1,100	241 at 15,000	28,800	1 x 20-mm and 4 x 7.7-mm	Bomber, torpedo bomber and transport; could take 1,760-lb torpedo

JAPANESE BOMBER AIRCRAFT—*continued.*
(including bomber/reconnaissance, bomber transport and torpedo bomber)

Aircraft	Still Air Range With Associated Bomb-load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
NELL 23 (MITSUBISHI G3M2 or G3M3 Type 96)— Twin engines; crew 4 to 7	2,550 2,125	nil 1,100	270 at 19,600	34,250	1 x 20-mm and 4 x 7.7-mm	Bomber, torpedo bomber and transport; could take 1,760-lb torpedo
PAUL 11 (AICHI E16A1)— Single engine; crew 2	1,690 1,320 580	nil 550 1,100	278 at 19,680	33,350	2 x 20-mm and 1 x 7.9, 7.7 or 13.2-mm or 3 x 7.7-mm or 1 x 13.2-mm	Float-plane. Reconnaissance and dive bomber
PEGGY 1 (MITSUBISHI Ki67)— Twin engines; crew 7 or 8	2,040 1,840 2,260	1,775 1,875 (*a*) 3,550 (*b*)	346 at 18,700	30,100	4 x 12.7-m and 1 x 20-mm	(*a*) torpedo (*b*) Suicide condition
PETE 11 (MITSUBISHI F1M2)— Single engine; crew 2	1,000	264 500	237 at 13,500	30,900	3 x 7.7-mm	Float-plane. Reconnaissance bomber.

SALLY 1 (MITSUBISHI Ki21, Type 97)— Twin engines; crew 4 to 7	2,160 1,695 1,200	1,100 2,200 4,400	245 at 8,000	24,800	5 or 7 x 7.7-mm or 4 x 7.7-mm and 1 x 20-mm	Sometimes also used for training
SALLY 2 & 3 (MITSUBISHI) Ki21/2 & 21/3, Type 97/2 & 97/3)— Twin engines; crew 4 to 7	1,905 1,635 650	nil 2,200 4,400	294 at 15,400	30,500	1 x 7.7-mm and 4 x 7.92-mm and 1 x 12.7-mm	Heavy bomber
SONIA 1 (MITSUBISHI AND RIKUGUN Ki51, Type 99)— Single engine; crew 2	1,540 (*a*) 1,445 1,725	440 440 1,100 (*b*)	254 at 9,000 243 at 9,000 (*b*)	27,200	3 x 7.7-mm	Reconnaissance, dive bomber and trainer (*a*) maximum fuel (*b*) suicide condition
VAL 11 (AICHI D3A2 or Ki99)— Single engine; crew 2	1,250 (*a*) 1,450 (*a*) 950	1,050 550 814	241 at 7,700	27,200	3 or 5 x 7.7-mm	Dive bomber (*a*) Maximum fuel
VAL 22 (AICHI D3A2)— Single engine; crew 2	1,580 965	nil 1,078	281 at 20,300	33,600	3 or 4 x 7.7-mm	Dive bomber

OTHER JAPANESE AIRCRAFT

Aircraft	Still Air Range With Associated Load		Maximum Speed in M.P.H. (Altitude in Feet)	Service Ceiling (Feet)	Gun Armament	Remarks
	Statute Miles	Load (lb)				
GLEN 11 (YOKOSUKA E14Y1)— Single engine; crew 2	700 (maximum) 200 (normal)	nil	125 at 2,500		1 x 7.7-mm	Submarine-borne float-plane used for reconnaissance
THORA 1 (NAKAJIMA Ki34)— Twin engines; crew 2	1,170	1,232 (*a*)	231 at 7,500	20,800	nil	Transport. (*a*) or 8 passengers. Also Thora 2
TOPSY 1 (MITSUBISHI Ki57, Type 0)— Twin engines; crew 4	1,909	1,694 (*a*)	278 at 19,000	31,600	nil	Transport. (*a*) or 11 passengers. Also Topsy 2 and 3

APPENDIX 5

ABBREVIATIONS AND DEFINITIONS

AA&QMG—*Assistant Adjutant and Quartermaster-General*
AACU—*Anti-Aircraft Cooperation Unit*
AAF—*Allied Air Forces*
AALU—*Australian Air Liaison Unit*
AAU—*Air Ambulance Unit*
AC—*Aircraftman*
ACH—*Area Combined Headquarters*
ACSEA—*Air Command, South-East Asia*
Act—*Acting*
ACW—*Aircraftwoman*
ADHQ—*Air Defence Headquarters*
Adm—*Admiral*
Admin—*Administration*
AFC—*Australian Flying Corps, Air Force Cross*
AFTU—*Air Fighter Training Unit*
AHQ—*Air Headquarters*
AIB—*Allied Intelligence Bureau*
AIF—*Australian Imperial Force*
Air Cmdre—*Air Commodore*
AIS—*Aviation Instructional Staff*
ALO—*Air Liaison Officer*
AMF—*Australian Military Forces*
AMOE—*Air Member for Organisation and Equipment*
AMP—*Air Member for Personnel*
AMS—*Air Member for Supply*
AN&MEF—*Australian Naval and Military Expeditionary Force*
ANGAU—*Australian New Guinea Administrative Unit*
ANS—*Air Navigation School*
AOB—*Advanced Operational Base*
AOC—*Air Officer Commanding*
AOC-in-C—*Air Officer Commanding-in-Chief*
AOP—*Air Observation Post*
AOS—*Air Observers' School*
ARC—*Aircrew Reception Centre*
ARD—*Aircraft Repair Depot, Aircraft Receiving Depot*
ASR—*Air-Sea Rescue*
ASRF—*Air-Sea Rescue Flight*
Asst—*Assistant*
ATC—*Air Training Corps*
AVG—*American Volunteer Group*
AVM—*Air Vice-Marshal*

BAGS—*Bombing and air gunnery school*
BCOF—*British Commonwealth Occupation Force*
Bde—*Brigade*
BEF—*British Expeditionary Force*
BGGS—*Brigadier-General, General Staff*
BM—*Brigade Major*
Bn—*Battalion*
Brig—*Brigadier*

CAC—*Commonwealth Aircraft Corporation*
CAF—*Citizen Air Force*
Capt—*Captain*
CAS—*Chief of Air Staff*
CATF—*China Air Task Force*
CCS—*Combined Chiefs of Staff*
Cd—*Command*
CDH—*Combined Defence Headquarters*
Cdr—*Commander*
CEO—*Chief Equipment Officer*
CFI—*Chief Flying Instructor*
CFS—*Central Flying School*
CGI—*Chief Ground Instructor, Chief Gunnery Instructor*
CGS—*Chief of the General Staff*
CI—*Chief Instructor*
C-in-C—*Commander-in-Chief*
CNS—*Chief of the Naval Staff*
CO—*Commanding Officer*
COIC—*Combined Operations and Intelligence Centre*
Col—*Colonel, Column*
COMAIRSOPAC—*Commander Aircraft South Pacific*
Comd—*Commanded*
Comdt—*Commandant*
Commn—*Communication*
Cpl—*Corporal*
CRE—*Commander, Royal Engineers (of a Division)*
CS—*Chief of Staff*
CU—*Communications Unit*
CWR—*Central War Room*

DAOC—*Deputy Air Officer Commanding*
DAOC-in-C—*Deputy Air Officer Commanding-in-Chief*
DCAS—*Deputy Chief of the Air Staff*
DCGS—*Deputy Chief of General Staff*
DF—*Direction finding*

DGMS—*Director-General Medical Services*
DGSP—*Director-General of Supply and Production*
Div—*Division*
DMS—*Director Medical Services*

EATS—*Empire Air Training Scheme*
Ech—*Echelon*
ED—*Embarkation Depot*
EFTS—*Elementary Flying Training School*
EO—*Equipment Officer, Engineer Officer*
ETO—*European Theatre of Operation*

FAA—*Fleet Air Arm*
FBRD—*Flying-boat Repair Depot*
FEAF—*Far East Air Force*
F-Lt—*Flight Lieutenant*
F-O—*Flying Officer*
FS—*Fighter Sector*
F-Sgt—*Flight Sergeant*
FSHQ—*Fighter Sector Headquarters*
FTS—*Flying Training School*

GCC—*Ground Control Centre*
Gen—*General*
GHQ—*General Headquarters*
GOC—*General Officer Commanding*
Gp Capt—*Group Captain*
GR—*General Reconnaissance*
GRS—*General Reconnaissance School*
GSO—*General Staff Officer*
GSO1—*General Staff Officer, Grade 1*

HBG—*Heavy Bombardment Group*
HQ—*Headquarters*

IG—*Inspector-General*
ILO—*Intelligence Liaison Officer*
Inf bde—*Infantry brigade*
Instr—*Instructor*
Intell—*Intelligence*
IO—*Intelligence Officer*
ITS—*Initial Training School*

JCS—*Joint Chiefs of Staff*

LAC—*Leading Aircraftman*
LASU—*Local Air Supply Unit*
LHQ—*Land Headquarters*
LO—*Liaison Office, Liaison Officer*
LRPG—*Long-Range Penetration Group*
Lt-Col—*Lieut-Colonel*
Lt-Gen—*Lieut-General*

Maj—*Major*
Maj-Gen—*Major-General*
MD—*Military District*
ME—*Middle East*
MFCU—*Mobile Fighter Control Unit*
MG—*Machine-gun*
MHR—*Member of the House of Representatives*
MLA—*Member of Legislative Assembly*
MU—*Maintenance Unit*

NCO—*Non-Commissioned Officer*
NEI—*Netherlands East Indies*
NGVR—*New Guinea Volunteer Rifles*
NT—*Northern Territory*

OB—*Operational Base*
OBU—*Operational Base Unit*
Offr—*Officer*
OHQ—*Overseas Headquarters*
Orgn—*Organisation*
OTU—*Operational Training Unit*

PAA—*Pan American Airways*
PDRC—*Personnel Dispatch and Reception Centre*
P-O—*Pilot Officer*
POW—*Prisoner of War*
PRC—*Personnel Reception Centre*
PRO—*Public Relations Officer*
PRU—*Photographic Reconnaissance Unit*

QANTAS—*Queensland and Northern Territory Aerial Services*

RAAF—*Royal Australian Air Force*
RAF—*Royal Air Force*
RAN—*Royal Australian Navy*
RDF—*Radio or Radar direction finding*
RE—*Royal Engineers*
Recce—*Reconnaissance*
Regt—*Regiment*
RFC—*Royal Flying Corps*
RIAF—*Royal Indian Air Force*
RNAS—*Royal Navy Air Service*
RNZAF—*Royal New Zealand Air Force*
RSU—*Repair and Salvage Unit*

SAO—*Senior Administrative Officer*
SAP—*Semi armour-piercing*
SASO—*Senior Air Staff Officer*
SEA—*South-East Asia*
SFTS—*Service Flying Training School*
Sgt—*Sergeant*
SHQ—*Station Headquarters*
Sigs—*Signals*

SISO—*Senior Intelligence Staff Officer*
SMSO—*Senior Maintenance Staff Officer*
SNO—*Senior Naval Officer*
SO—*Staff Officer*
SPSO—*Senior Personnel Staff Officer*
SPTF—*Seaplane Training Flight*
Sqn—*Squadron*
SSO—*Signals Security Officer*
SSOA—*Senior Staff Officer Administration*
Stn—*Station*
SWPA—*South-West Pacific Area*

Tac-R—*Tactical Reconnaissance*
TAF—*Tactical Air Force*
TMU—*Torpedo Maintenance Unit*

USAAC—*United States Army Air Corps*
USAAF—*United States Army Air Force*
USAFIA—*United States Army Forces in Australia*
USN—*United States Navy*

WAGS—*Wireless Air Gunners School*
W Cdr—*Wing Commander*
WMU—*Works Maintenance Unit*
W-O—*Warrant Officer*
WOD—*Warrant Officer Disciplinary*
W-T—*Wireless Telegraphy, Wireless Telegraphist*
WTU—*Works Training Unit*

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